```
?  e au=krieg
Ref   Items  Index-term
E1        4  AU=KRIEFTEWIRTH, M.
E2        1  AU=KRIEFTEWIRTH, MICHAEL
E3      169  AU=KRIEG
E4      374  AU=KRIEG A
E5       84  AU=KRIEG A F
E6       12  AU=KRIEG A H
E7        4  AU=KRIEG A J
E8      556  AU=KRIEG A M
E9      101  AU=KRIEG A.
E10      21  AU=KRIEG A.F.
E11       9  AU=KRIEG A.H.
E12      25  AU=KRIEG A.J.
E13     595  AU=KRIEG A.M.
E14       3  AU=KRIEG A.R.
E15       2  AU=KRIEG A.S.
E16      25  AU=KRIEG ADAM J
E17      30  AU=KRIEG AF
E18       1  AU=KRIEG AGOETTINGEN
E19       6  AU=KRIEG AH
E20      11  AU=KRIEG AJ
E21      16  AU=KRIEG ALEXANDER
E22       4  AU=KRIEG ALEXYS R
E23       1  AU=KRIEG ALOYS
E24      14  AU=KRIEG ALOYSIUS
E25     307  AU=KRIEG AM
          Enter PAGE for more

?  s e3-e17, e25
          169   AU=KRIEG
          374   AU=KRIEG A
           84   AU=KRIEG A F
           12   AU=KRIEG A H
            4   AU=KRIEG A J
          556   AU=KRIEG A M
          101   AU=KRIEG A.
           21   AU=KRIEG A.F.
            9   AU=KRIEG A.H.
           25   AU=KRIEG A.J.
          595   AU=KRIEG A.M.
            3   AU=KRIEG A.R.
            2   AU=KRIEG A.S.
           25   AU=KRIEG ADAM J
           30   AU=KRIEG AF
          307   AU=KRIEG AM
S1       2317  S E3-E17, E25

?  s s1 and ((CpG or CG or immunostimulatory or nucleotide or oligo?)
>>>W:  Unmatched parentheses
>>>E:  There is no result

?
?  s s1 and (CpG or CG or immunostimulatory or nucleotide or oligo?)
Processing
          2317   S1
        122745   CPG
         76559   CG
         29315   IMMUNOSTIMULATORY
       2606923   NUCLEOTIDE
       2269833   OLIGO?
S2        1350   S S1 AND (CPG OR CG OR IMMUNOSTIMULATORY OR NUCLEOTIDE OR OLIGO?)
```

```
?
?  rd
Processing
Processing
>>>W:  Duplicate detection is not supported for File 393.
Duplicate detection is not supported for File 391.
Records from unsupported files will be retained in the RD set.
S3         444   RD  (UNIQUE ITEMS)

?  s s3 and (palindrome or phosphorothioate)
           444   S3
          9434   PALINDROME
         49204   PHOSPHOROTHIOATE
S4          92   S S3 AND (PALINDROME OR PHOSPHOROTHIOATE)

?  d s
Set     Items   Description
S1       2317   S E3-E17, E25
S2       1350   S S1 AND (CPG OR CG OR IMMUNOSTIMULATORY OR NUCLEOTIDE OR OLIGO?)
S3        444   RD  (unique items)
S4         92   S S3 AND (PALINDROME OR PHOSPHOROTHIOATE)

?  e au=steinberg
Ref   Items  Index-term
E1        1  AU=STEINBERF R
E2      573  AU=STEINBERG
E3        1  AU=STEINBERG  F
E4        1  AU=STEINBERG , C. E. W.
E5        1  AU=STEINBERG , J.
E6        2  AU=STEINBERG , M. H.
E7        1  AU=STEINBERG , S.
E8      506  AU=STEINBERG A
E9        3  AU=STEINBERG A A
E10      12  AU=STEINBERG A B
E11       3  AU=STEINBERG A C
E12    1593  AU=STEINBERG A D
E13       1  AU=STEINBERG A D;
E14       2  AU=STEINBERG A E
E15     356  AU=STEINBERG A G
E16      11  AU=STEINBERG A H
E17      12  AU=STEINBERG A I
E18      18  AU=STEINBERG A J
E19       1  AU=STEINBERG A L
E20     129  AU=STEINBERG A M
E21       2  AU=STEINBERG A N
E22       2  AU=STEINBERG A O
E23       2  AU=STEINBERG A P
E24      16  AU=STEINBERG A S
E25      11  AU=STEINBERG A W
         Enter PAGE for more

?  s e2, e8-e25
          573   AU=STEINBERG
          506   AU=STEINBERG A
            3   AU=STEINBERG A A
           12   AU=STEINBERG A B
            3   AU=STEINBERG A C
         1593   AU=STEINBERG A D
            1   AU=STEINBERG A D;
            2   AU=STEINBERG A E
          356   AU=STEINBERG A G
           11   AU=STEINBERG A H
           12   AU=STEINBERG A I
```

```
          18   AU=STEINBERG A J
           1   AU=STEINBERG A L
         129   AU=STEINBERG A M
           2   AU=STEINBERG A N
           2   AU=STEINBERG A O
           2   AU=STEINBERG A P
          16   AU=STEINBERG A S
          11   AU=STEINBERG A W
S5      3253   S E2, E8-E25

?  s s5 and (CPG OR CG OR IMMUNOSTIMULATORY OR NUCLEOTIDE OR OLIGO?)
        3253   S5
      122745   CPG
       76559   CG
       29315   IMMUNOSTIMULATORY
     2606923   NUCLEOTIDE
     2269833   OLIGO?
S6         89   S S5 AND (CPG OR CG OR IMMUNOSTIMULATORY OR NUCLEOTIDE OR OLIGO?)

?  e e au=klinman
>>>W:  = is in the wrong position for expand

?  e au=klinman
Ref   Items  Index-term
E1        1  AU=KLINMAHORM, S.
E2        1  AU=KLINMALEE A.
E3       42  AU=KLINMAN
E4        1  AU=KLINMAN C S
E5       95  AU=KLINMAN D
E6        3  AU=KLINMAN D K
E7      516  AU=KLINMAN D M
E8        1  AU=KLINMAN D M; HOFFMAN S L
E9        5  AU=KLINMAN D R
E10      63  AU=KLINMAN D.
E11     472  AU=KLINMAN D.M.
E12       2  AU=KLINMAN D.R.
E13       3  AU=KLINMAN DA
E14      61  AU=KLINMAN DENNIS
E15       1  AU=KLINMAN DENNIS A
E16     298  AU=KLINMAN DENNIS M
E17       1  AU=KLINMAN DENNIS R
E18     251  AU=KLINMAN DM
E19       1  AU=KLINMAN DN
E20       1  AU=KLINMAN DP
E21       2  AU=KLINMAN DR
E22       5  AU=KLINMAN J
E23     354  AU=KLINMAN J P
E24      10  AU=KLINMAN J. P.
E25     373  AU=KLINMAN J.P.
         Enter PAGE for more

?  s e3, e14-e21
          42   AU=KLINMAN
          61   AU=KLINMAN DENNIS
           1   AU=KLINMAN DENNIS A
         298   AU=KLINMAN DENNIS M
           1   AU=KLINMAN DENNIS R
         251   AU=KLINMAN DM
           1   AU=KLINMAN DN
           1   AU=KLINMAN DP
           2   AU=KLINMAN DR
S7       658   S E3, E14-E21
```

```
?  s s7 and (CPG OR CG OR IMMUNOSTIMULATORY OR NUCLEOTIDE OR OLIGO?)
          658   S7
       122745   CPG
        76559   CG
        29315   IMMUNOSTIMULATORY
      2606923   NUCLEOTIDE
      2269833   OLIGO?
S8         373   S S7 AND (CPG OR CG OR IMMUNOSTIMULATORY OR NUCLEOTIDE OR OLIGO?)


?  s AACGTT
S1         256   S AACGTT

?  s s1 and (lip?)
Processing
Processing
          256   S1
      5876822   LIP?
S2         32   S S1 AND (LIP?)

?  s s1 and (oligonucleotide or antisense or sequence or dinucleotide or
immunostimulatory)
Processing
          256   S1
       500609   OLIGONUCLEOTIDE
       315122   ANTISENSE
      6782267   SEQUENCE
       205908   DINUCLEOTIDE
        30530   IMMUNOSTIMULATORY
S3         238   S S1 AND (OLIGONUCLEOTIDE OR ANTISENSE OR SEQUENCE OR DINUCLEOTIDE
OR IMMUNOSTIMULATORY)

?  rd
>>>W:  Duplicate detection is not supported for File 393.
Duplicate detection is not supported for File 391.
Records from unsupported files will be retained in the RD set.
S4          56   RD  (UNIQUE ITEMS)

?  t s4/3,k/1-54
>>>W:  KWIC option is not available in file(s): 399
 4/3,K/1 (Item 1 from file: 5)  Links
   Fulltext available through:   STIC Full Text Retrieval Options
Biosis Previews(R)
(c) 2009 The Thomson Corporation. All rights reserved.
002063528   Biosis No.: 200800682067
The effects of local DNA sequence on the interaction of ligands with their preferred
binding sites

Author: Hampshire Andrew J; Fox Keith R (Reprint)
Author Address: Univ Southampton, Sch Biol Sci, Bassett Crescent E, Southampton SO16
7PX, Hants, UK**UK
Author E-mail Address: k.r.fox@soton.ac.uk
Journal: Biochimie (Paris)   90 ( 7 ): p 988-998 JUL 2008 2008
Item Identifier: doi:10.1016/j.biochi.2008.01.001
ISSN: 0300-9084
Document Type: Article
Record Type: Abstract
Language: English
The effects of local DNA sequence on the interaction of ligands with their preferred
binding sites
```

Abstract: We have examined the effects of local DNA sequence on the interaction of distamycin, Hoechst 33258, echinomycin, actinomycin and mithramycin with their preferred binding sites using a series of DNA fragments that contain every symmetrical hexanucleotide sequence. In several instances we find that the affinity for the ligands' preferred binding sites is... ...yet shows no binding to TTCGAA, TGCGCA and AGCGCT, while the best binding is to AACGTT. The tetranucleotides CCGG and ACGT produce consistently good binding sites, irrespective of the surrounding sequences ... ...to all the potential symmetrical hexanucleotides and provide insights into the effects of local DNA sequence on ligand-DNA interactions. (c) 2008 Elsevier Masson SAS. All rights reserved.

4/3,K/2 (Item 2 from file: 5) Links
Fulltext available through: STIC Full Text Retrieval Options
Biosis Previews(R)

0020364532 Biosis No.: 200800411471
The expression profile of TLR9 mRNA and CpG ODNs immunostimulatory actions in the teleost gilthead seabream points to a major role of lymphocytes

Author: Cuesta A (Reprint); Esteban M A; Meseguer J
Author Address: Univ Murcia, Fac Biol, Dept Cell Biol and Histol, Fish Innate Immune Syst Grp, E-30100 Murcia, Spain**Spain
Author E-mail Address: cuesta.alberto@inia.es
Journal: Cellular and Molecular Life Sciences 65 (13): p 2091-2104 JUL 2008 2008

Item Identifier: doi:10.1007/s00018-008-8146-7
ISSN: 1420-682X
Document Type: Article
Record Type: Abstract
Language: English
The expression profile of TLR9 mRNA and CpG ODNs immunostimulatory actions in the teleost gilthead seabream points to a major role of lymphocytes

Abstract: ...cell-source. To conclude, ODNs containing GACGTT, GTCGTT (optimal for mouse and human, respectively) or AACGTT motifs are the most potent inducers of seabream immunity, whilst the involvement of TLR9 is...
DESCRIPTORS:
Miscellaneous Terms: Concept Codes: ...immunostimulatory action

4/3,K/3 (Item 3 from file: 5) Links
Fulltext available through: STIC Full Text Retrieval Options
Biosis Previews(R)

18218711 Biosis No.: 200500125776
DNA structure constraint is probably a fundamental factor inducing CpG deficiency in bacteria

Author: Wang Yong; Leung Frederick C C (Reprint)
Author Address: Dept Zool, Univ Hong Kong, Hong Kong, Hong Kong, China**China
Author E-mail Address: fcleung@hkucc.hku.hk
Journal: Bioinformatics (Oxford) 20 (18): p 3336-3345 December 12, 2004 2004
Medium: print
ISSN: 1367-4803
Document Type: Article
Record Type: Abstract
Language: English

Abstract: Motivation: It has been speculated that CpG dinucleotide deficiency in genomes is a consequence of DNA methylation. However, this hypothesis does not adequately... ...the TTCGAA pattern, was under represented in low GC content

bacterial genomes regardless of CpG dinucleotide level. This is in contrast to the AACGTT pattern, indicating that the counterselection is context-dependent. Further study discovered nine underrepresented patterns that... ...proposed for the strong correlation between GC content and CpG deficiency. The result of random sequence simulation showed that the occurrences of these patterns were correlated with GC content, as well...
DESCRIPTORS:
 Chemicals & Biochemicals: AACGTT; ... ...CpG dinucleotide--
Methods & Equipment: sequence simulation...
 Geographical Name:

 4/3,K/4 (Item 4 from file: 5) Links
   Fulltext available through: STIC Full Text Retrieval Options
Biosis Previews(R)

17222739 Biosis No.: 200300181458
CpG oligodeoxynucleotides activate grass carp (Ctenopharyngodon idellus) macrophages.

Author: Meng Zhen; Shao Jianzhong (Reprint); Xiang Lixin
Author Address: College of Life Sciences, Zhejiang University, Hangzhou, 310012, China** China
Author E-mail Address: lscshaoj@mail.hz.zj.cn
Journal: Developmental and Comparative Immunology 27 (4): p 313-321 April 2003 2003
Medium: print
ISSN: 0145-305X
Document Type: Article
Record Type: Abstract
Language: English

Abstract: ...ODN-1826 (GACGTT) and -2006 (GTCGTT) for the mice and humans cells, the ODN-1670 (AACGTT) used in Atlantic salmon, the ODN-D containing two repeats motif of those in 1670... ...found and the ODN-D was not more efficient than 1670. It suggests that the sequence which contains the unmethylated 'CG' dinucleotides could make contribute to this immunostimulatory effect. These findings indicate that CpG-ODNs could be useful tools for understanding the important...

 4/3,K/5 (Item 5 from file: 5) Links
   Fulltext available through: STIC Full Text Retrieval Options
Biosis Previews(R)

16834896 Biosis No.: 200200428407
DNA sequence recognition of thiazole-containing cross-linked polyamides can be favored by T-A steps

Author: Burckhardt G (Reprint); Simon H (Reprint); Birch-Hirschfeld E; Kittler L; Sharma S K; Lown J W; Zimmer C (Reprint)
Author Address: Institut fuer Molekularbiologie, Friedrich-Schiller-Universitaet (FSU) Jena, Winzerlaer Str. 10, D-07745, Jena, Germany**Germany
Journal: Journal of Biomolecular Structure and Dynamics 19 (6): p 1101-1109 June, 2002 2002
Medium: print
ISSN: 0739-1102
Document Type: Article
Record Type: Abstract
Language: English
DNA sequence recognition of thiazole-containing cross-linked polyamides can be favored by T-A steps

Abstract: The binding ability of cross-linked thiazolated polyamides (containing the base sequence-reading elements thiazole(Th)-pyrrole(Py)-pyr-role(Py) and thiazole(Th)-imidazole(Im)-pyrrol... ...concentration demonstrate that the dimers with a heptanediyl linker (C7 dimer) show a significantly higher sequence specificity than their corresponding monomers. The dimer of Th-Py-Py primarily prefers binding to ... ...of Th-Im-Py to the dodecamer sequences containing a GC pair within the central sequence (e.g. AACGTT). Surprisingly, the sequence binding ability is strongly influenced by the presence of a T-A step: e.g.. ...of the cross-linked dimer to the minor groove is discussed in light of the sequence recognition of the TATA box binding protein.
DESCRIPTORS:
Chemicals & Biochemicals: ...DNA sequence recognition

4/3,K/6 (Item 6 from file: 5) Links
Fulltext available through: STIC Full Text Retrieval Options
Biosis Previews(R)

16222243 Biosis No.: 200100394082
Immunostimulatory CpG-modified plasmid DNA enhances IL-12, TNF-alpha, and NO production by bovine macrophages

Author: Shoda Lisl K M; Kegerreis Kimberly A; Suarez Carlos E; Mwangi Waithaka; Knowles Donald P; Brown Wendy C (Reprint)
Author Address: Department of Veterinary Microbiology and Pathology, Washington State University, Pullman, WA, 99164-7040, USA**USA
Journal: Journal of Leukocyte Biology 70 (1): p 103-112 July, 2001 2001
Medium: print
ISSN: 0741-5400
Document Type: Article
Record Type: Abstract
Language: English
Immunostimulatory CpG-modified plasmid DNA enhances IL-12, TNF-alpha, and NO production by bovine macrophages

Abstract: ...plasmid DNA (pDNA) for B lymphocytes and professional antigen-presenting cells. In mice, modification of immunostimulatory sequences (ISSs), including CpG motifs, in pDNA vectors or oligodeoxynucleotides can increase or decrease their... ...murine and human leukocytes. We have previously characterized the mitogenic properties of oligodeoxynucleotides containing one AACGTT motif for bovine B lymphocytes. We now define cytokine responses by macrophages stimulated with pDNA engineered to contain an ISS comprising two AACGTT motifs. Macrophages activated with CpG-modified pDNA secreted significantly more interleukin-12, tumor necrosis factor...
DESCRIPTORS:
Chemicals & Biochemicals: ...immunostimulatory CpG-modified plasmid DNA

4/3,K/7 (Item 7 from file: 5) Links
Fulltext available through: STIC Full Text Retrieval Options
Biosis Previews(R)

16068303 Biosis No.: 200100240142
Multivalent DNA-based immunization against hepatitis B virus with plasmids encoding surface and core antigens

Author: Musacchio Alexis (Reprint); Rodriguez Ernesto G; Herrera Antonieta M; Quintana Diogenes; Muzio Verena
Author Address: Vaccine Division, Center for Genetic Engineering and Biotechnology of Havana, Havana, 10 600, Cuba**Cuba
Journal: Biochemical and Biophysical Research Communications 282 (2): p 442-446 March 30, 2001 2001

Medium: print
ISSN: 0006-291X
Document Type: Article
Record Type: Abstract
Language: English

Abstract: ...100 mug of each construct, either alone or in combination. In spite of lacking known immunostimulatory sequences (e.g., AACGTT), significant cellular (proliferative) and humoral immune responses were raised against both antigens. Coadministration of both... ...of the antigen expression and further immune response, by using the Kozak's translation initiation sequence, was also analyzed. No differences due to its presence or absence were observed.

4/3,K/8 (Item 8 from file: 5) Links
Fulltext available through: STIC Full Text Retrieval Options
Biosis Previews(R)

15665643 Biosis No.: 200000383956
Synthetic oligodeoxynucleotides inhibit IgE induction in human lymphocytes

Author: Fujieda Shigeharu (Reprint); Iho Sumiko; Kimura Yuichi; Yamamoto Hideyuki; Igawa Hideki; Saito Hitoshi
Author Address: Department of Otorhinolaryngology, Fukui Medical University, Shimoaizuki, Matsuoka, Yoshida, Fukui, 910-1193, Japan**Japan
Journal: American Journal of Respiratory and Critical Care Medicine 162 (1): p 232-239 July, 2000 2000
Medium: print
ISSN: 1073-449X
Document Type: Article
Record Type: Abstract
Language: English

Abstract: ...the MPB-70 of Mycobacterium bovis Bacillus Calmette-Guerin. Two ODNs, containing CGT-ACG or AACGTT inhibited IgE production by human PBMC. When other oligonucleotides were substituted in a portion of the sequence of the core or flanking oligonucleotides in the ODN containing CGTACG, ODNs containing NACGTTCG or...

4/3,K/9 (Item 9 from file: 5) Links
Fulltext available through: STIC Full Text Retrieval Options
Biosis Previews(R)

15386572 Biosis No.: 200000104885
Modulation of host immune responses by protozoal DNA

Author: Brown Wendy C (Reprint); Suarez Carlos E; Shoda Lisl KM; Estes D Mark
Author Address: Department of Veterinary Microbiology and Pathology, Washington State University, Pullman, WA, 99164-7040, USA**USA
Journal: Veterinary Immunology and Immunopathology 72 (1-2): p 87-94 Dec. 15, 1999 1999
Medium: print
ISSN: 0165-2427
Document Type: Article; Literature Review
Record Type: Abstract
Language: English

Abstract: ...IgG secretion by cultured B cells, stimulating IgG1 and more strongly, IgG2. Several hexameric CpG immunostimulatory sequences (ISS) active for murine B cells were identified in an 11 kb fragment of B. bovis DNA. An oligodeoxyribonucleotide containing one of these (AACGTT), located in the rhoptry associated protein-1 (rap-1) open reading frame, stimulated B cell...

DESCRIPTORS:
Chemicals & Biochemicals: ...immunostimulatory sequences

4/3,K/10 (Item 10 from file: 5) Links
Fulltext available through: STIC Full Text Retrieval Options
Biosis Previews(R)

15331378 Biosis No.: 200000049691
Influence of backbone chemistry on immune activation by synthetic oligonucleotides

Author: Pisetsky David S (Reprint); Reich Charles F III
Author Address: VA Medical Center, 508 Fulton St., Durham, NC, USA**USA
Journal: Biochemical Pharmacology 58 (12): p 1981-1988 Dec. 15, 1999 1999
Medium: print
ISSN: 0006-2952
Document Type: Article
Record Type: Abstract
Language: English

Abstract: Depending on base sequence, DNA displays immunological activities relevant to the design of novel therapeutic agents. To determine the... ...These compounds were 30 bases long and consisted of either a single base or an immunostimulatory sequence (AACGTT) flanked on 5' and 3' ends by 12 nucleotides of each base. Cell activation was... ...and cytokine production than the comparable phosphodiester compounds and had activity at lower concentrations. The sequence for optimal stimulation by phosphorothioates varied among responses, however. For example, whereas compounds containing an immunostimulatory sequence all induced similar levels of proliferation and CD69 expression, cytokine production was greatest with compounds... ...phosphodiesters and phosphorothioates, they failed to stimulate cytokine production. Together, these findings indicate that base sequence as well as backbone chemistry influence immune activation by synthetic oligonucleotides, with the effects varying...

4/3,K/11 (Item 11 from file: 5) Links
Fulltext available through: STIC Full Text Retrieval Options
Biosis Previews(R)

15169085 Biosis No.: 199900428745
The effect of CpG sequences on the B cell response to a viral glycoprotein encoded by a plasmid vector

Author: Pasquini S; Deng H; Reddy S T; Giles-Davis W; Ertl H C J (Reprint)
Author Address: Wistar Institute, 3601 Spruce Street, Philadelphia, PA, 19104, USA**USA
Journal: Gene Therapy 6 (8): p 1448-1455 Aug., 1999 1999
Medium: print
ISSN: 0969-7128
Document Type: Article
Record Type: Abstract
Language: English

Abstract: ...product in mice. The antibody response could be rescued by concomitant injection of oligonucleotides carrying immunostimulatory sequences. The B cell response to two plasmid vectors, both expressing the same viral glycoprotein but containing a different content of the highly stimulatory AACGTT motif, was compared. Comparable B cell responses were induced to the two constructs given at...

4/3,K/12 (Item 12 from file: 5) Links
Fulltext available through: STIC Full Text Retrieval Options
Biosis Previews(R)

14989425 Biosis No.: 199900249085
Mammalian granulocyte-macrophage colony-stimulating factor and some CpG motifs have an effect on the immunogenicity of DNA and subunit vaccines in fish

Author: Kanellos T S; Sylvester I D; Butler V L; Ambali A G; Partidos C D; Hamblin A S; Russell P H (Reprint)
Author Address: Department of Pathology and Infectious Diseases, Royal Veterinary College, Royal College Street, London, NW1 OTY, UK**UK
Journal: Immunology 96 (4): p 507-510 April, 1999 1999
Medium: print
ISSN: 0019-2805
Document Type: Article
Record Type: Abstract
Language: English

Abstract: A eukaryotic plasmid DNA carrying the AACGTT CpG motif in its ampR gene is a 'danger' signal for mice and caused an... ...no effect on antibody responses to beta-gal in either fish or mice. A synthetic oligonucleotide, which contains the GACGTT motif, potentiated antibody responses to co-administered beta-gal protein in...

4/3,K/13 (Item 13 from file: 5) Links
Fulltext available through: STIC Full Text Retrieval Options
Biosis Previews(R)

14717222 Biosis No.: 199800511469
DNA and a CpG oligonucleotide derived from Babesia bovis are mitogenic for bovine B cells

Author: Brown Wendy C (Reprint); Estes D Mark; Chantler Sue Ellen; Kegerreis Kimberly A; Suarez Carlos E
Author Address: Dep. Vet. Microbiol. Pathol., Washington State Univ., Pullman, WA 99164-7040, USA**USA
Journal: Infection and Immunity 66 (11): p 5423-5432 Nov., 1998 1998
Medium: print
ISSN: 0019-9567
Document Type: Article
Record Type: Abstract
Language: English
DNA and a CpG oligonucleotide derived from Babesia bovis are mitogenic for bovine B cells

Abstract: ...human B cells, an 11-kb fragment of B. bovis DNA was analyzed for CG dinucleotide content and for the presence of known immunostimulatory sequences (ISS) centered on a CG motif. The frequency of CG dinucleotides was approximately one... ...known activity for murine B cells were identified. An oligodeoxynucleotide containing one of these ISS (AACGTT), which is present within the rhoptry-associated protein-1 (rap-1) open reading frame, was...
DESCRIPTORS:
Chemicals & Biochemicals: CpG oligonucleotide; ... ...immunostimulatory sequences

4/3,K/14 (Item 14 from file: 5) Links
Fulltext available through: STIC Full Text Retrieval Options
Biosis Previews(R)

14060235 Biosis No.: 199799694295
Immune stimulation-a class effect of phosphorothioate oligodeoxynucleotides in rodents

Author: Monteith David K (Reprint); Henry Scott P; Howard Randy B; Flournoy Shin; Levin Arthur A; Bennett C Frank; Crooke Stanley T
Author Address: Isis Pharmaceuticals, 2292 Faraday Ave., Carlsbad, CA 92008, USA**USA
Journal: Anti-Cancer Drug Design 12 (5): p 421-432 1997 1997
ISSN: 0266-9536
Document Type: Article
Record Type: Abstract
Language: English

Abstract: ...B-lymphocyte proliferation in vitro and splenomegaly correlated well for the oligodeoxynucleotides tested. Particular oligodeoxynucleotide sequence motifs or palindromes have been demonstrated to affect in vitro cell proliferation. Inclusion of a 5'-AACGTT-3' palindrome in a phosphorothioate oligodeoxynucleotide sequence significantly enhanced the potency. While inclusion of this palindrome or a CpG motif alone may...

4/3,K/15 (Item 15 from file: 5) Links
  Fulltext available through: STIC Full Text Retrieval Options
Biosis Previews(R)

13684118 Biosis No.: 199799318178
Hexamer palindromic oligonucleotides with 5'-CG-3' motif(s) induce production of interferon

Author: Sonehara Kazuhiko; Saito Hitoshi; Kuramoto Etsuro (Reprint); Yamamoto Saburo; Yamamoto Toshiko; Tokunaga Tohru
Author Address: Inst. Biological Science, Mitsui Pharmaceuticals Inc., 1900-1 Togo, Mobara, Chiba 297, Japan**Japan
Journal: Journal of Interferon and Cytokine Research 16 (10): p 799-803 1996 1996
ISSN: 1079-9907
Document Type: Article
Record Type: Abstract
Language: English

Abstract: ...cells, and thus exhibit tumor-regressing activity. The present study showed that a hexamer palindromic oligonucleotide (5'-AACGTT -3') alone induced IFN from mouse spleen cells when added with cationic liposomes. Accordingly, 32... ...the activity. No hexamer oligonucleotides showed the activity when liposomes were absent. A complete palindromic sequence was essential as any single base substitution resulted in diminished activity. Among variety of palindromic oligonucleotides of different sizes with an ACGT sequence at the center, the tetramer oligonucleotide was without activity, whereas the activity of hexamer and longer oligonucleotides was almost equally high... ...strongly suggest that the minimal essential structure required for IFN induction is the hexamer palindromic sequence with CG motif(s).

4/3,K/16 (Item 16 from file: 5) Links
  Fulltext available through: STIC Full Text Retrieval Options
Biosis Previews(R)

12654035 Biosis No.: 199598121868
Myb proteins 'talking' to their DNA (review)

Author: Boulikas Teni
Author Address: Inst. Molecular Med. Sci., 460 Page Mill Road, Palo Alto, CA 94306, USA** USA
Journal: International Journal of Oncology 5 (1): p 101-109 1994 1994
ISSN: 1019-6439
Document Type: Article; Literature Review

Record Type: Abstract
Language: English

Abstract: DNA sequence-specific proteins called transcription factors found in all multicellular organisms control the expression of genes... ...mammals including humans, plants, flies, Dictyostelium, and yeast. Myb proteins show a preference for the AACGTT, AACnGTT and the AA-C-TAAC-T-GGAA motifs with AAC (or its complementary GTT...

4/3,K/17 (Item 17 from file: 5) Links
Fulltext available through: STIC Full Text Retrieval Options
Biosis Previews(R)

12605903 Biosis No.: 199598073736
Binding of oligoguanylate to scavenger receptors is required for oligonucleotides to augment NK cell activity and induce IFN

Author: Kimura Yoshimitsu (Reprint); Sonehara Kazuhiko (Reprint); Kuramoto Etsuro (Reprint); Makino Tadashi; Yamamoto Saburo; Yamamoto Toshiko; Kataoka Tetsuro; Tokunaga Tohru
Author Address: Inst. Biological Sci., Mitsui Pharmaceuticals Inc., 1900-1 Togo, Mobara, Chiba 297, Japan**Japan
Journal: Journal of Biochemistry (Tokyo) 116 (5): p 991-994 1994 1994
ISSN: 0021-924X
Document Type: Article
Record Type: Abstract
Language: English

Abstract: ...sequences, we investigated the possible target molecules of the oligonucleotides. Oligo-1, a30mer single-stranded oligonucleotide with oligoG sequences next to the active palindromic sequence (AACGTT), had more activity than oligonucleotides with oligoA, oligoC, or oligoT sequences. The activity of oligo... ...the scavenger receptor on mouse splenocytes. These findings suggest that the binding of an extrapalindromic sequence to the scavenger receptor is required for the immunostimulatory activity of oligo-1.
DESCRIPTORS:
Miscellaneous Terms: Concept Codes: ...PALINDROMIC SEQUENCE

4/3,K/18 (Item 18 from file: 5) Links
Fulltext available through: STIC Full Text Retrieval Options
Biosis Previews(R)

12542786 Biosis No.: 199598010619
Lipofection of synthetic oligodeoxyribonucleotide having a palindromic sequence of AACGTT to murine splenocytes enhances interferon production and natural killer activity

Author: Yamamoto Toshiko (Reprint); Yamamoto Saburo; Kataoka Tetsuro; Tokunaga Tohru

Author Address: Dep. Bacterial Blood Products, Natl. Inst. Health, 4-7-1 Gakuen, Musashi-Murayama, Tokyo 208, Japan**Japan
Journal: Microbiology and Immunology 38 (10): p 831-836 1994 1994
ISSN: 0385-5600
Document Type: Article
Record Type: Abstract
Language: English
Lipofection of synthetic oligodeoxyribonucleotide having a palindromic sequence of AACGTT to murine splenocytes enhances interferon production and natural killer activity

Abstract: A synthetic 22-mer oligodeoxyribonucleotide having an AACGTT palindrome, AAC-22, induced interferon (IFN) production and augmented the natural killer (NK) activity in...

4/3,K/19 (Item 19 from file: 5) Links
Fulltext available through: STIC Full Text Retrieval Options
Biosis Previews(R)

12491543 Biosis No.: 199497512828
Synthetic oligonucleotides with certain palindromes stimulate interferon production of human peripheral blood lymphocytes in vitro

Author: Yamamoto Toshiko (Reprint); Yamamoto Saburo (Reprint); Kataoka Tetsuro (Reprint); Komuro Katsutoshi (Reprint); Kohase Masayoshi; Tokunaga Tohru
Author Address: Dep. Bacterial Blood Products, Natl. Inst. Health, 4-7-1 Gakuen, Musashimurayama-shi, Tokyo 208, Japan**Japan
Journal: Japanese Journal of Cancer Research 85 (8): p 775-779 1994 1994
ISSN: 0910-5050
Document Type: Article
Record Type: Abstract
Language: English

Abstract: ...of synthetic single-stranded 30-mer oligodeoxyribonucleotides (oligoDNAs) with three different kinds of hexamer palindromic sequence to induce interferon (IFN) production of human peripheral blood lymphocytes (PBL). When PBL was cultured with oligoDNA having a palindrome of AACGTT or GACGTC, IFN activity was detected by bioassay in the culture fluid after 8 h...

4/3,K/20 (Item 20 from file: 5) Links
Fulltext available through: STIC Full Text Retrieval Options
Biosis Previews(R)

11359027 Biosis No.: 199294060868
UNIQUE PALINDROMIC SEQUENCES IN SYNTHETIC OLIGONUCLEOTIDES ARE REQUIRED TO INDUCE INF AND AUGMENT INF-MEDIATED NATURAL KILLER ACTIVITY

Author: YAMAMOTO S (Reprint); YAMAMOTO T; KATAOKA T; KURAMOTO E; YANO O; TOKUNAGA T
Author Address: DEP CELLULAR IMMUNOLOGY, NATIONAL INSTITUTE HEALTH, 2-10-35 KAMIOHSAKI, SHINAGAWA-KU, TOKYO 141, JPN**JAPAN
Journal: Journal of Immunology 148 (12): p 4072-4076 1992
ISSN: 0022-1767
Document Type: Article
Record Type: Abstract
Language: ENGLISH

Abstract: Thirty-mer single-stranded oligonucleotides, with a sequence chosen from the known cDNA encoding the 64-kDa protein named Ag A or the... ...cell activity of mouse spleen cells by coincubation in vitro. Three with the hexamer palindromic sequence as GACGTC were active, whereas two kinds of oligonucleotides with no palindrome were inactive. The... ...least one of the different palindromic sequences showed no activity. When a portion of the sequence of the inactive oligonucleotides was substituted with either palindromic sequence of GACGTC, AGCGCT, or AACGTT, the oligonucleotide acquired the ability to augment NK activity. In contrast, the oligonucleotides substituted with another palindromic sequence such as ACCGGT was without effect. Furthermore, exchange of two neighboring mononucleotides within, but not outside, the active palindromic sequence destroyed the ability of the oligonucleotides to augment NK cell activity. Stimulation of spleen cells with the substituted oligonucleotide, A4a-AAC, induced production of significant amounts of IFN-.alpha./.beta. and small amounts of IFN-.gamma.. Augmentation of NK activity of the cells by the oligonucleotide was ascribed to IFN-.alpha./.beta. production. These results strongly suggest that the presence of the unique panlindromic

sequences, such as GACGTC, AGCGCT, and AACGTT, but not ACCGGT, is essential for the immunostimulatory activity of oligonucleotides.

4/3,K/21 (Item 21 from file: 5) Links
Fulltext available through: STIC Full Text Retrieval Options

10880479 Biosis No.: 199192126250
INTERACTION OF THE V-MYB AND C-MYB PROTEINS WITH REGULATORY SEQUENCES OF THE HUMAN C-MYC GENE

Author: ZOBEL A (Reprint); KALKBRENNER F; GUEHMANN S; NAWRATH M; VORBRUEGGEN G; MOELLING K
Author Address: MAX-PLANCK-INST MOLEKULARE GENETIK, ABT SCHUSTER, IHNESTRASSE 73, D-1000 BERLIN 33, GER**GERMANY
Journal: Oncogene 6 (8): p 1397-1408 1991
ISSN: 0950-9232
Document Type: Article
Record Type: Abstract
Language: ENGLISH

Abstract: ...different affinities whereby strong binding correlates better with conservation of the palindromic sequences, AACXGTT or AACGTT, than the previously described consensus sequence. Flanking AT-rich sequences further increase the binding affinity. The c-Myb-binding sites are...
Descriptors: ONCOGENES NUCLEOTIDE SEQUENCE MOLECULAR SEQUENCE DATA GENE EXPRESSION

4/3,K/22 (Item 1 from file: 24) Links
Fulltext available through: STIC Full Text Retrieval Options

0002443079 IP Accession No: 5551323
Effect of hsp65 DNA vaccination carrying immunostimulatory DNA sequences (CpG motifs) against Mycobacterium leprae multiplication in mice

Nomaguchi, H; Mukai, T; Takeshita, F; Matsuoka, M; Maeda, Y; Aye, TM; Jahan, N; Yogi, Y; Sato, MEY; Makino, M* Leprosy Research Center, National Institute of Infectious Diseases, 4-2-1-Aobacho, Higashimurayma, Tokyo 189-0002, Japan, [mailto:mmaki@nih.go.jp]
International Journal of Leprosy and Other Mycobacterial Diseases , v 70 , n 3 , p 182-190 , September 2002
Publication Date: 2002

Document Type: Journal Article
Record Type: Abstract
Language: English
Summary Language: English; Spanish; French
ISSN: 0148-916X
File Segment: Bacteriology Abstracts (Microbiology B)
Effect of hsp65 DNA vaccination carrying immunostimulatory DNA sequences (CpG motifs) against Mycobacterium leprae multiplication in mice

Abstract:
...and humoral antigen (Ag)-specific immune responses. It has been reported that palindromic, single stranded immunostimulatory DNA sequences (ISS) induce production of IFN- alpha , IFN- beta and IFN- gamma by murine ... ...ISS include the palindromic CpG-containing hexamers: 5'-GACGTC-3', 5'-AGCGCT-3', and 5'-AACGTT-3'. Recently, Sato, et al., reported that a pDNA expression vector (pACB) containing two repeats of 5'- AACGTT-3' in the ampR gene is highly immunogenic, because it elicits

strong Ag-specific immunity...

Identifiers: Immunostimulatory DNA sequences
Subj Catg:

4/3,K/23 (Item 2 from file: 24) Links
Fulltext available through: STIC Full Text Retrieval Options
CSA Life Sciences Abstracts

0002405727 IP Accession No: 5726736
Enhanced cell-mediated IFN- gamma -secreting activity against the HIV-1IIIB V3 peptide of the TAB9 multiepitope after DNA vaccine backbone engineering

Rodriguez, EG*; Vazquez, DM; Herrera, AM; Duarte, CA Vaccine Division, Center for Genetic Engineering and Biotechnology of Havana, P.O. Box 6162, Havana 10600, Cuba, [mailto:ernesto.galban@cigb.edu.cu]
Biochemical and Biophysical Research Communications , v 308 , n 4 , p 713-718 , September 5, 2003
Publication Date: 2003
Publisher: Elsevier Inc.

Document Type: Journal Article
Record Type: Abstract
Language: English
Summary Language: English
ISSN: 0006-291X
File Segment: Nucleic Acids Abstracts; Virology & AIDS Abstracts

Abstract:
...globin-based termination/polyadenylation sequences, and 5, 10, and 20 copies of the 5 super()-AACGTT-3 super() CpG motif were inserted. Balb/c mice were immunized by intramuscular injection of...

Descriptors: Repeated sequence; Genetic engineering; Antigens; DNA viruses; Plasmids; Epitopes; gamma -Interferon; Immunoglobulin G; Expression vectors; Polyadenylation; DNA...
Identifiers:

4/3,K/24 (Item 3 from file: 24) Links
Fulltext available through: STIC Full Text Retrieval Options
CSA Life Sciences Abstracts

0002111341 IP Accession No: 4758218
DNA Sequence Recognition of a Cross-Linked Polyamide: CD Studies, Footprinting and Effects on the Activity of DNA Gyrase

Burckhardt, G; Foertsch, I; Simon, H; Birch-Hirschfeld, E; Kittler, L; Schuetz, H; Sharma, SK; Lown, JW; Zimmer, C Institut fuer Molekularbiologie der Friedrich-Schiller-Universitaet (FSU) Jena, Winzerlaer Str. 10, D-07745 Jena, Germany, [mailto:christoph.zimmer@rz.uni-jena.de]
Editor: Sarma, RH; Sarma, MH (eds)
Journal of Biomolecular Structure and Dynamics , v 11 , n 2 , p 355-363 , March 28, 2000
Publication Date: 2000
Publisher: Adenine Press, 2066 Central Avenue Schenectady NY 12304 USA

Conference:
Proc. 11th Conversation in Biomolecular Stereodynamics, Albany,NY (USA), 15-19 Jun 2000

Document Type: Journal Article; Conference

Record Type: Abstract
Language: English
Summary Language: English
ISSN: 0739-1102
File Segment: Nucleic Acids Abstracts
DNA Sequence Recognition of a Cross-Linked Polyamide: CD Studies, Footprinting and Effects on the Activity of...

Abstract:
...a clear-cut different binding tendency to various dodecamers at 2 M NaCl indicating that sequence specificity becomes apparent at high salt concentration. The highest binding preference occurs to the dodecamers with the central sequences: AACGTT, AAGTTT and ATCGTA but almost no affinity was observed at 2 M NaCl for AGCGCT, ATCGAT and AAATTT. From the results it appears that the sequence selectivity of the dimer can be ascribed to the side-by-side binding mode of...

4/3,K/25 (Item 4 from file: 24) Links
Fulltext available through: STIC Full Text Retrieval Options
CSA Life Sciences Abstracts

0002018988 IP Accession No: 4634558
Presence of CpG DNA and the Local Cytokine Milieu Determine the Efficacy of Suppressive DNA Vaccination in Experimental Autoimmune Encephalomyelitis

Lobell, A; Weissert, R; Eltayeb, S; Svanholm, C; Olsson, T; Wigzell, H Microbiology and Tumorbiology Center, Karolinska Institute, Box 280, S-171 77 Stockholm, Sweden, [mailto:Anna.Lobell@mtc.ki.se]
Journal of Immunology , v 163 , n 9 , p 4754-4762 , November 1, 1999
Publication Date: 1999

Document Type: Journal Article
Record Type: Abstract
Language: English
Summary Language: English
ISSN: 0022-1767
File Segment: Immunology Abstracts; Medical & Pharmaceutical Biotechnology Abstracts

Abstract:
We here study the adjuvant properties of immunostimulatory DNA sequences (ISS) and coinjected cytokine-coding cDNA in suppressive vaccination with DNA encoding an... ...necessary for efficient DNA vaccination, we studied the effect of one such ISS, the 5'-AACGTT-3' motif, in our system. Treatment with a DNA vaccine encoding myelin basic protein peptide 68-85 and containing three ISS of 5'-AACGTT-3' sequence suppressed clinical signs of EAE, while a corresponding DNA vaccine without such ISS had no...

Descriptors: ...colony-stimulating factor; Tumor necrosis factor- alpha ; Myelin basic protein; Vaccines; Cytokines; Experimental allergic encephalomyelitis; immunostimulatory DNA sequences; DNA vaccines
Identifiers:

4/3,K/26 (Item 5 from file: 24) Links
Fulltext available through: STIC Full Text Retrieval Options
CSA Life Sciences Abstracts

0001556843 IP Accession No: 3830608
Ability of oligonucleotides with certain palindromes to induce interferon production and augment natural killer cell activity is associated with their base length

Yamamoto, T; Yamamoto, S; Kataoka, T; Tokunaga, T Dep. Bact. and Blood Prod., Natl. Inst. Health, Gakuen, 4-7-1, Musashi-Murayama-shi, Tokyo 208, Japan
ANTISENSE RES. DEV. , v 4 , n 2 , p 119-122 , 1994
Addl. Source Info: ANTISENSE RES. DEV., vol. 4, no. 2, pp. 119-122, 1994
Publication Date: 1994

Document Type: Journal Article
Record Type: Abstract
Language: English
Summary Language: English
ISSN: 1050-5261
File Segment: Medical & Pharmaceutical Biotechnology Abstracts; Nucleic Acids Abstracts; Immunology Abstracts

Abstract:
A synthetic 30-mer single-stranded oligodeoxyribonucleotide with a hexamer palindrome, AACGTT, induced IFN production and augmented NK activity in murine splenocytes. This effect does not appear to result from an antisense mechanism but rather is due to the palindrome. To clarify the required minimal size of the nucleotide, 10 kinds of 12- to 30-mer nucleotides were examined. Immunostimulatory activity of oligonucleotides 18 bases or more in length was observed and was proportional to... ...16 bases or less in length were not active even if they possessed the palindromic sequence. These results indicate that the immunostimulatory activity of oligonucleotides with certain palindromic sequences requires an oligonucleotide at least 18 bases long.

Subj Catg: ...Antisense; 14250
Material Class:

4/3,K/27 (Item 6 from file: 24) Links
Fulltext available through: STIC Full Text Retrieval Options
CSA Life Sciences Abstracts

0001058036 IP Accession No: 2572893
Interaction of the v- and c-Myb proteins with regulatory sequences of the human c-myc gene.

Zobel, A; Kalkbrenner, F; Guehmann, S; Nawrath, M; Vorbrueggen, G; Moelling, K Max-Planck-Inst. Mol. Genet., Abt. Schuster, Ihnestr. 73, D-1000 Berlin 33, FRG
Oncogene , v 6 , n 8 , p 1397-1407 , 1991
Addl. Source Info: Oncogene, vol. 6, no. 8, pp. 1397-1407, 1991
Publication Date: 1991

Document Type: Journal Article
Record Type: Abstract
Language: English
Summary Language: English
ISSN: 0950-9232
File Segment: Nucleic Acids Abstracts; Human Genome Abstracts; Oncogenes & Growth Factors Abstracts

Abstract:
...different affinities whereby strong binding correlates better with conservation of the palindromic sequences, AACXGTT or AACGTT, than the previously described consensus sequence. Flanking AT-rich sequences further increase the binding affinity. The c-Myb-binding sites are...

Identifiers: genes; oncogenes; c-myc gene; binding; sites; regulatory; nucleotide sequence; man; non-cooperativity; Myb protein
Subj Catg:

4/3,K/28 (Item 1 from file: 34) Links
Fulltext available through: STIC Full Text Retrieval Options
SciSearch(R) Cited Ref Sci

10160766 Genuine Article#: 491GD No. References: 48
Induction of interleukin-6 and interleukin-12 in bovine B lymphocytes, monocytes, and macrophages by a CpG oligodeoxynucleotide (ODN 2059) containing the GTCGTT motif

Author: Zhang Y; Shoda LKM; Brayton KA; Estes DM; Palmer GH; Brown WC (REPRINT)
Corporate Source: Washington State Univ,Coll Vet Med, Dept Vet Microbiol & Pathol,Pullman//WA/99164 (REPRINT); Washington State Univ,Coll Vet Med, Dept Vet Microbiol & Pathol,Pullman//WA/99164; Univ Missouri,Coll Vet Med, Dept Pathobiol,Columbia//MO/65211
Journal: JOURNAL OF INTERFERON AND CYTOKINE RESEARCH , 2001 , V 21 , N10 (OCT) , P 871-881
ISSN: 1079-9907 Publication date: 20011000
Publisher: MARY ANN LIEBERT INC PUBL , 2 MADISON AVENUE, LARCHMONT, NY 10538 USA
Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)
Abstract: ...B cell proliferation at a lower concentration (10 muM) when compared with CpG ODN containing AACGTT or GACGTT motifs active for murine leukocytes. Furthermore, ODN 2059 induced interleukin-6 (IL-6...
Identifiers-- ...SURFACE PROTEIN-2; NECROSIS-FACTOR-ALPHA; IFN-GAMMA PRODUCTION; BACTERIAL-DNA; BABESIA-BOVIS; IN-VITRO; IMMUNOSTIMULATORY PROPERTIES; IMMUNE-RESPONSES; TH1 IMMUNITY

4/3,K/29 (Item 1 from file: 50) Links
Fulltext available through: STIC Full Text Retrieval Options
CAB Abstracts

0008401615 CAB Accession Number: 20033043653
CpG oligodeoxynucleotides activate grass carp (Ctenopharyngodon idellus [idella]) macrophages.

Meng Zhen; Shao JianZhong; Xiang LiXin
Author email address: lscshaoj@mail.hz.zj.cn
College of Life Sciences, Zhejiang University, Hangzhou 310012, China.
Developmental and Comparative Immunology vol. 27 (4): p.313-321
Publication Year: 2003
ISSN: 0145-305X
Digital Object Identifier: 10.1016/S0145-305X(02)00104-0
Publisher: Elsevier Science Inc. New York , USA
Language: English Record Type: Abstract
Document Type: Journal article
... ODN-1826 (GACGTT) and -2006 (GTCGTT) for the mice and humans cells, the ODN-1670 (AACGTT) used in Atlantic salmon, the ODN-D containing two repeats motif of those in 1670... ... found and the ODN-D was not more efficient than 1670. It suggests that the sequence which contains the unmethylated 'CG' dinucleotides could make contribute to this immunostimulatory effect. These findings indicate that CpG-ODNs could be useful tools for understanding the important...

4/3,K/30 (Item 1 from file: 71) Links
ELSEVIER BIOBASE

0000653430 Supplier Number: 1994168545
Lipofection of synthetic oligodeoxyribonucleotide having a palindromic sequence of AACGTT to murine splenocytes enhancers interferon production and natural killer activity
Yamamoto T.; Yamamoto S.; Kataoka T.; Tokunaga T.

Corresp. Author/Affil: Yamamoto T., Dept. Bacterial and Blood Products, National Institute of Health, 4-7-1 Gakuen, Musashi-Murayama, Tokyo 208 , Japan
Journal : Microbiology and Immunology (MICROBIOL. IMMUNOL.) , v38, n10, (831-836) , 1994 , Japan
Publication Date: November 10, 1994 (19941110)
Coden: MIIMD
ISSN: 0385-5600 eISSN: 1471-2970
Record Type: Abstract; New
Document Type: Article
Languages: English Summary Languages: English
Lipofection of synthetic oligodeoxyribonucleotide having a palindromic sequence of AACGTT to murine splenocytes enhancers interferon production and natural killer activity

A synthetic 22-mer oligodeoxyribonucleotide having an AACGTT palindrome, AAC-22, induced interferon (IFN) production and augmented the natural killer (NK) activity in...

4/3,K/31 (Item 2 from file: 71) Links
ELSEVIER BIOBASE

0000606721 Supplier Number: 1994108402
Myb proteins 'talking' to their DNA
Boulikas T.
Corresp. Author/Affil: Boulikas T., Inst. of Molecular Medical Sciences, 460 Page Mill Road, Palo Alto, CA, 94306 , United States
Journal : International Journal of Oncology (INT. J. ONCOL.) , v5, n1, (101-109) , 1994 , Greece
Publication Date: June 21, 1994 (19940621)
Coden: IJONE
ISSN: 1019-6439 eISSN: 1471-2970
Record Type: Abstract; New
Document Type: Review
Languages: English Summary Languages: English

DNA sequence-specific proteins called transcription factors found in all multicellular organisms control the expression of genes... ...mammals including humans, plants, flies, Dictyostelium, and yeast. Myb proteins show a preference for the AACGTT, AACnGTT and the T G AACAACTGAA motifs with AAC (or its complementary GTT) as the...

4/3,K/32 (Item 1 from file: 72) Links
Fulltext available through: STIC Full Text Retrieval Options
EMBASE

0081683649 EMBASE No: 2007117237
Innovative restriction site created PCR-RFLP for detection of benzimidazole resistance in Teladorsagia circumcincta

Shayan P.; Eslami A.; Borji H.
Department of Parasitology, Faculty of Veterinary Medicine, University of Tehran, Tehran, Iran, Islamic Republic of
Author email: pshayan@ut.ac.ir
Corresp. Author/Affil: Shayan P.: Department of Parasitology, Faculty of Veterinary Medicine, University of Tehran, Tehran, Iran, Islamic Republic of
Corresp. Author Email: pshayan@ut.ac.ir

Parasitology Research (Parasitol. Res.) (Germany) April 1, 2007 , 100/5 (1063-1068)
CODEN: PARRE ISSN: 0932-0113
Item Identifier (DOI): 10.1007/s00436-006-0357-y

Document Type: Journal ; Article Record Type: Abstract
Language: English Summary language: English
Number of References: 27

...introduced modification in forward primer (UTvet MF-primer) leads to the creation of restriction site (AACGTT) for PSP1. Therefore, in the case of normal allele only, PSP1 can cut the corresponding...
Medical Descriptors:
*
animal experiment; article; controlled study; DNA flanking region; DNA isolation; female; gene amplification; gene sequence; heterozygote; homozygote; male; nonhuman; nucleotide sequence; priority journal; sheep
Orig. Descriptors:

4/3,K/33 (Item 2 from file: 72) Links
Fulltext available through: STIC Full Text Retrieval Options
EMBASE

0079620924 EMBASE No: 2003328937
Enhanced cell-mediated IFN-gamma-secreting activity against the HIV-1 SUB IIIB V3 peptide of the TAB9 multiepitope after DNA vaccine backbone engineering

Rodriguez E.G.; Vazquez D.M.; Herrera A.M.; Duarte C.A.
Vaccine Division, Ctr. Genetic Eng./Biotech. of Havana, P.O. Box 6162, Havana 10600, Cuba
Author email: ernesto.galban@cigb.edu.cu
Corresp. Author/Affil: Rodriguez E.G.: Vaccine Division, Ctr. Genetic Eng./Biotech. of Havana, P.O. Box 6162, Havana 10600, Cuba
Corresp. Author Email: ernesto.galban@cigb.edu.cu

Biochemical and Biophysical Research Communications (Biochem. Biophys. Res. Commun.) (United States) September 5, 2003 , 308/4 (713-718)
CODEN: BBRCA ISSN: 0006-291X
Item Identifier (DOI): 10.1016/S0006-291X(03)01462-1
Document Type: Journal ; Article Record Type: Abstract
Language: English Summary language: English
Number of References: 25

...beta globin-based termination/polyadenylation sequences, and 5, 10, and 20 copies of the 5prime-AACGTT-3prime CpG motif were inserted. Balb/c mice were immunized by intramuscular injection of 200mug...
Medical Descriptors:
*
...splicing; enzyme linked immunosorbent assay; enzyme linked immunospot assay; female; Fowlpox virus; gene insertion; gene sequence; genetic engineering; Human immunodeficiency virus 1; immunization; immunoassay; intron; mouse; nonhuman; polyadenylation; priority journal; promoter...
Orig. Descriptors:

4/3,K/34 (Item 3 from file: 72) Links
Fulltext available through: STIC Full Text Retrieval Options
EMBASE

0075876834 EMBASE No: 1994295619
Mode of action of oligonucleotide fraction extracted from Mycobacterium bovis BCG

Yamamoto S.
National Institute of Health, Gakuen 4-7-1, Musashi-Murayama, Tokyo 208, Japan
Corresp. Author/Affil: Yamamoto S.: National Institute of Health, Gakuen 4-7-1, Musashi-Murayama, Tokyo 208, Japan

Kekkaku (KEKKAKU) (Japan) October 17, 1994 , 69/9 (571-574)
CODEN: KEKKA ISSN: 0022-9776
Document Type: Journal ; Article Record Type: Abstract
Language: Japanese Summary language: English
Mode of action of oligonucleotide fraction extracted from Mycobacterium bovis BCG

...size, and peaked at 45 nucleotides. We synthesized 13 kinds of 45-mer nucleotides with sequence present in the known cDNA encoding various BCG proteins. Six out of these oligonucleotides, which... ...cell activity of mouse spleen cells by coincubation in vitro. When a portion of the sequence of the inactive oligonucleotides was substituted with either palindromic sequence of GACGTC, AGCGCT or AACGTT, the oligonucleotide acquired the ability to augment NK activity. In contrast, the oligonucleotides substituted with another palindromic sequence such as ACCGGT was without effect. Furthermore, exchange of two neighboring mononucleotides within, but not outside, the active palindromic sequence destroyed the ability of the oligonucleotide to augment NK activity. Taken together, these findings indicate that some, but not all, of... ...sequences also influenced the activity. Eighteen-mer to 30-mer oligonucleotides with 6-mer palindromic sequence as AACGTT showed the activity, while those less than 16-mer oligonucleotides did not. A 30-mer oligonucleotide with a 10-mer palindrome and extra-palindromic oligoguanylate sequences showed the strongest activity among... ...the incubation for 18-24 hr; lipofection was 3000-fold more efficient than the naked oligonucleotide. While an inactive 22-mer oligonucleotide, ACC-22, took little to induce IFN. The binding of SUP 32p-oligonucleotides to mouse... ...surface receptor to transfer the inducing signal into the cell. The reason why the active oligonucleotide possess activity is still obscure. A further study on the mode of action for IFN...

17106085 PASCAL No.: 05-0172909

DNA structure constraint is probably a fundamental factor inducing CpG deficiency in bacteria

YONG WANG; LEUNG Frederick C C
Department of Zoology, The University of Hong Kong, Pokfulam, Hong Kong
Journal: Bioinformatics : (Oxford. Print),
2004, 20 (18)
3336-3345
Language: English

Motivation: It has been speculated that CpG dinucleotide deficiency in genomes is a consequence of DNA methylation. However, this hypothesis does not adequately...

... the TTCGAA pattern, was under represented in low GC content bacterial genomes regardless of CpG dinucleotide level. This is in contrast to the AACGTT pattern, indicating that the counterselection is context-dependent. Further study discovered nine underrepresented patterns that...

... proposed for the strong correlation between GC content and CpG deficiency. The result of random sequence simulation showed that the occurrences of these patterns were correlated with GC content, as well...

4/3,K/36 (Item 1 from file: 154) Links
Fulltext available through: STIC Full Text Retrieval Options
MEDLINE(R)

14798735 PMID: 12023812
DNA sequence recognition of thiazole-containing cross-linked polyamides can be favored.

Burckhardt G; Simon H; Birch-Hirschfeld E; Kittle L; Sharma S K; Lown J W; Zimmer C
Institut fur Molekularbiologie, Friedrich-Schiller-Universitat (FSU) Jena, Winzerlaer Str. 10, D-07745 Jena, Germany.
Journal of biomolecular structure & dynamics (United States) Jun 2002 , 19 (6) p1101-9 , ISSN: 0739-1102--Print Journal Code: 8404176
Publishing Model Print
Document type: Journal Article; Research Support, Non-U.S. Gov't
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
DNA sequence recognition of thiazole-containing cross-linked polyamides can be favored.

The binding ability of cross-linked thiazolated polyamides (containing the base sequence-reading elements thiazole(Th)-pyrrole(Py)-pyr-role(Py) and thiazole(Th)-imidazole(Im)-pyrrol... ...concentration demonstrate that the dimers with a heptanediyl linker (C7 dimer) show a significantly higher sequence specificity than their corresponding monomers. The dimer of Th-Py-Py primarily prefers binding to ... ...of Th-Im-Py to the dodecamer sequences containing a GC pair within the central sequence (e.g. AACGTT). Surprisingly, the sequence binding ability is strongly influenced by the presence of a T-A step: e.g... ...of the cross-linked dimer to the minor groove is discussed in light of the sequence recognition of the TATA box binding protein. (
Descriptors: ; AT Rich Sequence--physiology--PH; Animals; Binding Sites; Cattle; DNA--genetics--GE; Ligands
Named Person:

4/3,K/37 (Item 2 from file: 154) Links
Fulltext available through: STIC Full Text Retrieval Options
MEDLINE(R)

11280459 PMID: 7526022
[Commemorative lecture of receiving Imamura Memorial Prize. II. Mode of action of oligonucleotide fraction extracted from Mycobacterium bovis BCG]

Yamamoto S
National Institute of Health, Tokyo, Japan.
Kekkaku - Tuberculosis (JAPAN) Sep 1994 , 69 (9) p571-4 , ISSN: 0022-9776--Print Journal Code: 0422132
Publishing Model Print
Document type: English Abstract; Journal Article
Languages: JAPANESE
Main Citation Owner: NLM
Record type: MEDLINE; Completed
[Commemorative lecture of receiving Imamura Memorial Prize. II. Mode of action of oligonucleotide fraction extracted from Mycobacterium bovis BCG]

...size, and peaked at 45 nucleotides. We synthesized 13 kinds of 45-mer nucleotides with sequence present in the known cDNA encoding various BCG proteins. Six out of these oligonucleotides, which... ...cell activity of mouse spleen cells by

coincubation in vitro. When a portion of the sequence of the inactive oligonucleotides was substituted with either palindromic sequence of GACGTC, AGCGCT or AACGTT, the oligonucleotide acquired the ability to augment NK activity. In contrast, the oligonucleotides substituted with another palindromic sequence such as ACCGGT was without effect. Furthermore, exchange of two neighboring mononucleotides within, but not outside, the active palindromic sequence destroyed the ability of the oligonucleotide to augment NK activity.(ABSTRACT TRUNCATED AT 250 WORDS) (Descriptors: ; Animals; Awards and Prizes; Base Sequence; Interferons--biosynthesis --BI; Killer Cells, Natural--immunology--IM; Mice; Molecular Sequence Data
Named Person:

4/3,K/38 (Item 3 from file: 154) Links
Fulltext available through: STIC Full Text Retrieval Options
MEDLINE(R)

10339483 PMID: 1376349
Unique palindromic sequences in synthetic oligonucleotides are required to induce IFN [correction of INF] and augment IFN-mediated [correction of INF] natural killer activity.

Yamamoto S; Yamamoto T; Kataoka T; Kuramoto E; Yano O; Tokunaga T
Department of Cellular Immunology, National Institute of Health, Tokyo, Japan.
Journal of immunology (Baltimore, Md. - 1950) (UNITED STATES) Jun 15 1992 , 148 (12) p4072-6 , ISSN: 0022-1767--Print Journal Code: 2985117R
Publishing Model Print
Document type: Journal Article; Research Support, Non-U.S. Gov't
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
Thirty-mer single-stranded oligonucleotides, with a sequence chosen from the known cDNA encoding the 64-kDa protein named Ag A or the... ...cell activity of mouse spleen cells by coincubation in vitro. Three with the hexamer palindromic sequence as GACGTC were active, whereas two kinds of oligonucleotides with no palindrome were inactive. The... ...least one of the different palindromic sequences showed no activity. When a portion of the sequence of the inactive oligonucleotides was substituted with either palindromic sequence of GACGTC, AGCGCT, or AACGTT, the oligonucleotide acquired the ability to augment NK activity. In contrast, the oligonucleotides substituted with another palindromic sequence such as ACCGGT was without effect. Furthermore, exchange of two neighboring mononucleotides within, but not outside, the active palindromic sequence destroyed the ability of the oligonucleotides to augment NK cell activity. Stimulation of spleen cells with the substituted oligonucleotide, A4a-AAC, induced production of significant amounts of IFN-alpha/beta and small amounts of IFN-gamma. Augmentation of NK activity of the cells by the oligonucleotide was ascribed to IFN-alpha/beta production. These results strongly suggest that the presence of the unique palindromic sequences, such as GACGTC, AGCGCT, and AACGTT, but not ACCGGT, is essential for the immunostimulatory activity of oligonucleotides. (
Descriptors: ; Animals; Base Sequence; Complement C1 Inactivator Proteins--genetics --GE; Cytotoxicity, Immunologic; Heat-Shock Proteins--genetics--GE; Mice; Mice, Inbred BALB C; Molecular Sequence Data; Mycobacterium bovis --genetics--GE; Oligodeoxyribonucleotides--chemistry--CH; Structure-Activity Relationship
Named Person:

4/3,K/39 (Item 1 from file: 370) Links
Science

00500536 (USE 9 FOR FULLTEXT)
Immunostimulatory DNA Sequences Necessary for Effective Intradermal Gene Immunization

Sato, Yukio; Roman, Mark; Tighe, Helen; Lee, Delphine; Corr, Maripat; Nguyen,

Minh-Duc; Silverman, Gregg J.; Lotz, Martin; Carson, Dennis A.; Raz, Eyal
Department of Medicine and The Sam and Rose Stein Institute for Research on Aging, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0663, USA.
Science Vol. 273 5273 pp. 352
Publication Date: 7-19-1996 (960719) Publication Year: 1996
Document Type: Journal ISSN: 0036-8075
Language: English
Section Heading: Reports
Word Count: 2127 (THIS IS THE FULLTEXT)
Immunostimulatory DNA Sequences Necessary for Effective Intradermal Gene Immunization

Abstract:

...immune responses to the encoded antigens. Instead, the immunogenicity of plasmid DNA (pDNA) requires short immunostimulatory DNA sequences (ISS) that contain a CpG dinucleotide in a particular base context. Human monocytes transfected with pDNA or double-stranded oligonucleotides containing...

Text:

...To test the hypothesis that the ampR sequence may up-regulate the immune response to (beta) -Gal in gene-vaccinated mice, we injected...

...Palindromic, single-stranded immunostimulatory DNA sequences (ISS) have been reported to induce production of IFN-a, IFN- (beta) , and ...

...hexamers: 5 (prime) -GACGTC-3 (prime) , 5 (prime) -AG-CGCT-3 (prime) , and 5 (prime) -AACGTT-3 (prime) (B7) . Two repeats of 5 (prime) -AACGTT-3 (prime) were in the ampR gene, whereas no ISS were identified within the kanR gene (Fig. 1). To test the hypothesis that the 5 (prime) -AACGTT-3 (prime) ISS within the ampR gene facilitates the induction of CTL and T.inf...

...to (beta) -Gal, we subcloned either one or two repeats of the ISS 5 (prime) -AACGTT-3 (prime) to sites flanking the kanR gene in the pKCB-Z vector. The new...

...The immunostimulatory effect of bacterial DNA was discovered by Tokunaga et al. (B8) . By synthesizing single-stranded...

...activation (B10) . They found that cytosine methylation or the elimination of the CpG from the oligonucleotide abolished the lymphocyte stimulatory effect. The activation capability was attributed to a series of CpG...based vectors, we transfected in vitro fresh human monocytes with a panel of pDNAs, ISS oligonucleotide, and ISS-deficient oligonucleotide (B12) (B13) and then assessed by reverse transcription-polymerase chain reaction (RT-PCR) the expression...

...pKISS-1-CB, and double-stranded ISS digonucleotide, but not with pKCB or ISS-deficient oligonucleotide, enhanced within 3 hours mRNA amounts for all three cytokines (B12) (B13) . IFN-a plays...

...expression does not necessarily produce a stronger immune response. Both the localization and the precise sequence of the ISS within the plasmid backbone are also important for DNA vaccination. Thus, the...

...Fig. 1). In contrast, the addition of one or two repeats of the 5

(prime) -AACGTT-3 (prime) sequence to the noncoding region of the pKCB-Z backbone enhanced the immune response to (beta...

...of the 5 (prime) -GACGTC-3 (prime) , 5 (prime) -AGCGCT-3 (prime) , and 5 (prime) -AACGTT-3 (prime) palindromic ISS (B7) . The pACS and pACB vectors are pUC19-based plasmids (with the Pst I-Bam HI sites of the aforementioned corresponding vectors. The putative immunostimulatory double-stranded oligonucleotide (sense, 5 (prime) -AATTGAACGTTCGC-3 (prime) ; antisense, 5 (prime) -AATTGCGAACGTTC-3 (prime)) flanked by Eco RI-compatible overhangs was ligated into a unique Eco RI site of pACB, 3 (prime) to the BGHpA sequence. This resulted in the disruption of the Eco RI site and the creation of a new Psp1406I restriction site (AACGTT). The ISS-containing region was then subcloned (Bsp HI-Bam HI) into the pKCB and...

...2-CB and pKISS-2-CB-Z were constructed by ligation of the same ISS oligonucleotide into pKISS-1-CB and pKISS-1-CB-Z at a different Eco RI site...

References and Notes:

...of the annealed, blunt-end, double-stranded oligonucleotides used for transfection are as follows: ISS oligonucleotide, 5 (prime) -TCATTGGAAAACGTTCTTCGGGGCG-3 (prime) , from the ampR gene in the pUC19 sequence (nucleotides 2288 to 2312); and ISS-deficient oligonucleotide, 5 (prime) -TCATTGGAAAAGGTTCTTGGGGGGG-3 (prime) . Bold nucleotides indicate the ISS...

4/3,K/40 (Item 1 from file: 393) Links
Beilstein Database - Abstracts
(c) 2008 Beilstein GmbH. All rights reserved.
Beilstein Abstract Id: 6641612
Title: Influence of Backbone Chemistry on Immune Activation by Synthetic Oligonucleotides
Document Type: Journal Record Type: Abstract
Author: Pisetsky, David S.; Reich, Charles F.
Citation: Biochem. Pharmacol. (1999) Series: 58-12, 1981 - 1988 CODEN: BCPCA6
Language: English
Abstract Language: English
Abstract: Depending on base sequence, DNA displays immunological activities relevant to the design of novel therapeutic agents. To determine the... ...These compounds were 30 bases long and consisted of either a single base or an immunostimulatory sequence (AACGTT) flanked on 5' and 3' ends by 12 nucleotides of each base. Cell activation was... ...and cytokine production than the comparable phosphodiester compounds and had activity at lower concentrations. The sequence for optimal stimulation by phosphorothioates varied among responses, however. For example, whereas compounds containing an immunostimulatory sequence all induced similar levels of proliferation and CD69 expression, cytokine production was greatest with compounds... ...phosphodiesters and phosphorothioates, they failed to stimulate cytokine production. Together, these findings indicate that base sequence as well as backbone chemistry influence immune activation by synthetic oligonucleotides, with the effects varying...
Abstract Language:

4/3,K/41 (Item 1 from file: 35) Links
Dissertation Abs Online
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01970603 ORDER NO: AADAA-IC814652
Reactivity of human and porcine natural interferon-alpha producing cells to immunostimulatory DNA

Author: Magnusson, Mattias
Degree: Fil.dr.
Year: 2003
Corporate Source/Institution: Sveriges Lantbruksuniversitet (Sweden) (0697)
Source: Volume 6501C of Dissertations Abstracts International.
PAGE 103 . 49 PAGES
ISBN: 91-576-6389-0
Publisher: Sveriges Lantbruksuniversitet, Box 7071, SE-750 07 Uppsala, Sweden
Reactivity of human and porcine natural interferon-alpha producing cells to immunostimulatory DNA

...but pcDNA3 retained this ability after mutation of the CpG-motifs (5<super>′</super>AACGTT 3<super>′</super>) in the ampicillin resistance gene. Lipofection and presence of an unmethylated... ...of unmethylated CpG dinucleotides. This indicates that there are species differences in the recognition of immunostimulatory DNA and that eukaryotic DNA sometimes can be interferogcnic. Certain CpG-containing ODNs with flanking... ...lipofectin, both as phosphorothioate/phosphodiester chimeric ODNs or as phosphodiester ODNs. Addition of poly-G, sequence to the phosphodiester ODN H clearly enhanced its activity, but did not replace the need... ...the only cells among human or porcine PBMC that produced IFN-α in response to immunostimulatory DNA.
The human NIPC/PDC also produce IFN-α in response to apoptotic cells in... ...bind, FcγR had a general inhibitory effect on IFN-α production induced by immunostimulatory DNA or herpes simplex virus.
Elucidation of the mechanisms whereby NIPC/PDC are activated may...

4/3,K/42 (Item 2 from file: 35) Links
Dissertation Abs Online

01940291 ORDER NO: AADAA-I3086326
Effects of immunostimulatory DNA sequences on bovine immune responses

Author: Zhang, Yan
Degree: Ph.D.
Year: 2002
Corporate Source/Institution: Washington State University (0251)
Source: Volume 6403B of Dissertations Abstracts International.
PAGE 1125 . 73 PAGES
Effects of immunostimulatory DNA sequences on bovine immune responses

...cell proliferation at a lower concentration (10 μM) when compared with CpG ODN containing AACGTT or GACGTT motifs active for murine leukocytes. Furthermore, ODN 2059 induced IL-6 production by...

4/3,K/43 (Item 1 from file: 44) Links
Aquatic Science & Fisheries Abstracts

0000866811 IP Accession No: 5341511
CpG oligodeoxynucleotides enhance the non-specific immune responses on carp, Cyprinus carpio

Book Title: 6th Asian Fisheries Forum Book of Abstracts

Malina, AC; Tassakka, AR; Sakai, Masahiro Faculty of Agriculture, Miyazaki University, Gakuen Kibanadai Nishi 1-1, Miyazaki 889-2192, Miyazaki, Japan, [mailto:m.sakai@cc.miyazaki-u.ac.jp]
, p p. 217 , 2001
Publication Date: 2001
Publisher: Asian Fisheries Society, Unit A, Mayaman Townhomes 25 Mayaman Streeet UP Village, Quezon City Philippines

Conference:
6. Asian Fisheries Forum, Kaohsiung (Taiwan), 25-30 Nov 2001

Document Type: Book Monograph; Conference
Record Type: Abstract
Language: English
ASFA No: CSQ208566
File Segment: ASFA Marine Biotechnology Abstracts; ASFA 1: Biological Sciences & Living Resources; ASFA Aquaculture Abstracts

Abstract:
...ability to enhance the non-specific immune response in carp. The oligodeoxynucleotides containing the fish-immunostimulatory motif 5'-AACGTT-3' with the following sequences; ODN A = GCT AGA CGT TAA CGT T and ODN...

4/3,K/44 (Item 1 from file: 135) Links
NewsRx Weekly Reports

0000878440 (USE FORMAT 7 OR 9 FOR FULLTEXT)

Findings from University of Southampton advance knowledge in DNA research

Life Science Weekly, September 2, 2008, p.2811

DOCUMENT TYPE: Expanded Reporting LANGUAGE: English
RECORD TYPE: FULLTEXT

Word Count:
490

TEXT: 8 SEP 2 - (& NewsRx.net) -- Research findings, 'The effects of local DNA sequence on the interaction of ligands with their preferred binding sites,' are discussed in a new...
Biochimie , "We have examined the effects of local DNA sequence on the interaction of distamycin, Hoechst 33258, echinomycin, actinomycin and mithramycin with their preferred binding sites using a series of DNA fragments that contain every symmetrical hexanucleotide sequence. In several instances we find that the affinity for the ligands' preferred binding sites is...

...yet shows no binding to TTCGAA, TGCGCA and AGCGCT, while the best binding is to AACGTT. The tetranucleotides CCGG and ACGT produce consistently good binding sites, irrespective of the surrounding sequences ...

...to all the potential symmetrical hexanucleotides and provide insights into the effects of local DNA sequence on ligand-DNA interactions." Hampshire and colleagues published their study in Biochimie (The effects of local DNA sequence on the interaction of ligands with their preferred binding sites. Biochimie , 2008;90(7):988...

...Medicales Elsevier, 23 Rue Linois, 75724 Paris, France. Keywords: United Kingdom, Southampton, DNA Research, DNA Sequence Proteomics, Deoxyribonucleic Acid. This article was prepared by Life Science Weekly editors from staff and...

DESCRIPTORS: United Kingdom; Southampton; DNA Research; DNA Sequence Proteomics; Deoxyribonucleic AcidAll News; Professional News

4/3,K/45 (Item 1 from file: 185) Links
Fulltext available through: STIC Full Text Retrieval Options
Zoological Record Online(R)

09019699 BIOSIS No. 14411065460
The expression profile of TLR9 mRNA and CpG ODNs immunostimulatory actions in the teleost gilthead seabream points to a major role of lymphocytes.

Authors: Cuesta, A. (a); Esteban, M.A.; Meseguer, J.
Authors Address: (a) Univ Murcia, Fac Biol, E-30100 Murcia; Spain
cuesta.alberto@inia.es
Source: CMLS Cellular and Molecular Life Sciences 65(13), July 2008: 2091-2104. [Print]
Document Type: Article
ISSN: 1420-682X
Languages: English
Record Type: Abstract
The expression profile of TLR9 mRNA and CpG ODNs immunostimulatory actions in the teleost gilthead seabream points to a major role of lymphocytes.

Abstract: ...cell-source. To conclude, ODNs containing GACGTT, GTCGTT (optimal for mouse and human, respectively) or AACGTT motifs are the most potent inducers of seabream immunity, whilst the involvement of TLR9 is...
Descriptors:
...Immunostimulatory potential of oligodeoxynucleotides

4/3,K/46 (Item 1 from file: 357) Links
Derwent Biotech Res.

0388765 DBA Accession No.: 2006-02261 PATENT
New immunostimulatory oligonucleotide of at least 8 nucleotides in length, useful in preparing a vaccine against infections caused by bacteria, parasites or virus, e.g. Hemophilus influenza or Mycobacterium tuberculosis immunostimulatory oligonucleotide for nucleic acid vaccine and infectious disease therapy and gene therapy

Author: KRIEG A M; KLINE J; KLINMAN D; STEINBERG A D
Patent Assignee: UNIV IOWA RES FOUND; COLEY PHARM GROUP INC; US DEPT HEALTH and HUMAN SERVICES 2005
Patent Number: US 20050277609 Patent Date: 20051215 WPI Accession No.: 2006-028460 (200603)
Priority Application Number: US 31460 Application Date: 20050107
National Application Number: US 31460 Application Date: 20050107
Language: English
New immunostimulatory oligonucleotide of at least 8 nucleotides in length, useful in preparing a vaccine against infections caused by bacteria, parasites or virus, e.g. Hemophilus influenza or Mycobacterium tuberculosis immunostimulatory oligonucleotide for nucleic acid vaccine and infectious disease therapy and gene therapy
Abstract: DERWENT ABSTRACT: NOVELTY - A new immunostimulatory oligonucleotide of at least 8 nucleotides in length comprises a sequence having 6 base pairs. DETAILED DESCRIPTION - A new immunostimulatory oligonucleotide of at least 8 nucleotides in length comprises a sequence consisting of AACGTC or GGCGTF. INDEPENDENT CLAIMS are also included for: (1) an immunostimulatory composition comprising the immunostimulatory oligonucleotide and an antigen, adjuvant or immunotherapy; (2)

modulating an immune response; (3) preventing an infectious disease; and (4) screening for human immunostimulatory activity of oligonucleotides. BIOTECHNOLOGY - Preferred Oligonucleotide: The immunostimulatory oligonucleotide includes more than one CpG motif. The immunostimulatory oligonucleotide of at least 8 nucleotides in length is represented by the formula (I) or (II... ...is TpT, CpT or GpT. X1, X2, X3 and X4 are nucleotides. Preferred Composition: The immunostimulatory composition comprises an immunostimulatory nucleic acid and an antigen. The immunostimulatory nucleic acid comprises 5'-cytosine, guanine-3'. The immunostimulatory nucleic acid and the antigen are proximately associated at a distance effective to enhance an immune response. The immunostimulatory nucleic acid comprises a palindromic region, comprising the sequence 5'-cytosine, guanine-3'. The immunostimulatory nucleic acid comprises 5'-purine, purine, cytosine, guanine, pyrimidine, pyrimidine-3'. The immunostimulatory nucleic acid comprises a sequence consisting of AACGTT, AGCGTT, GACGTT, GGCGTF, AACGTC, or AACGCT. The immunostimulatory nucleic acid and antigen are proximately associated by encapsulation within liposomes or by linkage to a delivery molecule. The immunostimulatory nucleic acid and antigen are proximately associated such that the immunostimulatory nucleic acid and the antigen are co-delivered to an immune target. The immune target... ...cell. The antigen-presenting cell is a dendritic or macrophage cell, or a lymphocyte. The immunostimulatory composition further comprises an adjuvant. Preferred Method: Modulating an immune response in a subject comprises administering the immunostimulatory oligonucleotide or immunostimulatory composition to a subject in an amount sufficient to modulate the immune response. The method...
...papillomavirus or human immunodeficiency virus. Preventing an infectious disease in a subject comprises administering the immunostimulatory composition. The infectious disease is due to a viral, bacterial or parasitic infection. The virus is Hemophilus influenza or Mycobacterium tuberculosis. Screening for human immunostimulatory activity of oligonucleotides comprises: (a) providing macrophage cells and an oligonucleotide to be tested; (b) incubating the cells and oligonucleotide of step (a) for an appropriate length of time; and (c) determining the relative amount... ...ACTIVITY - Antibacterial; Virucide; Antiparasitic. No biological data is given. MECHANISM OF ACTION - Vaccine. USE - The immunostimulatory oligonucleotide is useful in preparing a composition for preventing an infectious disease caused by bacteria, parasites...
E.C. Numbers:
Descriptors: immunostimulatory oligonucleotide, antigen, adjuvant, immunotherapy, immune response modulation, human immunostimulatory act. screening, appl. nucleic acid vaccine, parasite, virus, Hemophilus influenza, Mycobacterium tuberculosis infectious disease therapy, prevention, gene therapy animal mammal bacterium DNA sequence (25, 04)

4/3,K/47 (Item 2 from file: 357) Links
Derwent Biotech Res.

0374956 DBA Accession No.: 2005-20662 PATENT
Treating viral infection in a subject comprises administering to a subject an immunostimulatory nucleic acid molecule comprising an unmethylated CpG dinucleotide, in an amount effective to treat or ameliorate a viral infection method of gene therapy of a virus infection involving the use of an unmethylated CpG dinucleotide encoded by a plasmid immunostimulant

Author: KRIEG A M; KLINMAN D; STEINBERG A D
Patent Assignee: UNIV IOWA RES FOUND; US DEPT HEALTH and HUMAN SERVICES 2005
Patent Number: US 20050148537 Patent Date: 20050707 WPI Accession No.: 2005-478101 (200548)
Priority Application Number: US 987146 Application Date: 20041112
National Application Number: US 987146 Application Date: 20041112
Language: English
Treating viral infection in a subject comprises administering to a subject an immunostimulatory nucleic acid molecule comprising an unmethylated CpG dinucleotide, in an amount effective to treat or ameliorate a viral infection method of gene therapy of a virus infection involving the use of an unmethylated CpG dinucleotide

encoded by a plasmid immunostimulant
Abstract: DERWENT ABSTRACT: NOVELTY - Treating viral infection in a subject comprises administering to a subject an immunostimulatory nucleic acid molecule comprising an unmethylated CpG dinucleotide, in an amount effective to treat or ameliorate a viral infection, thus treating the infection in the subject. WIDER DISCLOSURE - Also disclosed includes an immunostimulatory nucleic acid molecule. BIOTECHNOLOGY - Preferred Method: In treating viral infection in a subject, the immunostimulatory nucleic acid molecule is an immunostimulatory oligodeoxyribonucleotide, purified bacterial DNA, a plasmid DNA including sufficient immunostimulatory motifs to be immunostimulatory, or a plasmid DNA which after being administered to the subject is degraded into oligonucleotides. The immunostimulatory nucleic acid molecule comprises a CpG motif composed of an unmethylated CpG flanked by two 5' purines and two 3' pyrimidines. The immunostimulatory nucleic acid molecule comprises a CpG motif in which the CpG is flanked by a 5' GpT dinucleotide and two 3' pyrimidines. The immunostimulatory nucleic acid molecule is 8-100 nucleotides long and comprises a CpG motif represented by... ...as GpT, GpG, GpA, TpT, CpT and GpT The immunomodulatory nucleic acid molecule comprises a sequence selected from: AACGCC; AACGCT; AACGTC; AACGTT; AGCGCC; AGCGCT; AGCGTC; AGCGTT; GACGCC; GACGCT; GACGTC; GACGTT; GGCGCC; GGCGCT; GGCGTC; GGCGTT; ATCGCC; ATCGCT; ATCGTC...
E.C. Numbers:
Descriptors: plasmid, unmethylated CpG dinucleotide, immunostimulant, appl., virus infection gene therapy virucide DNA sequence (24, 33)

4/3,K/48 (Item 3 from file: 357) Links
Derwent Biotech Res.

0359372 DBA Accession No.: 2005-05076 PATENT
Use of an immunostimulatory oligonucleotide for boosting an immune response of a subject, or for stimulating an immune response in a subject, where increases in IFN-gamma and IL-12 expression are indicators of the immune response immunostimulatory oligonucleotide and vaccine for use in disease therapy and gene therapy

Author: KRIEG A M; KLINMAN D; STEINBERG A D
Patent Assignee: UNIV IOWA RES FOUND; COLEY PHARM GROUP INC; US DEPT COMMERCE and NAT INST STANDARDS 2005
Patent Number: US 20050004062 Patent Date: 20050106 WPI Accession No.: 2005-065257 (200507)
Priority Application Number: US 847650 Application Date: 20040517
National Application Number: US 847650 Application Date: 20040517
Language: English
Use of an immunostimulatory oligonucleotide for boosting an immune response of a subject, or for stimulating an immune response in... ...where increases in IFN-gamma and IL-12 expression are indicators of the immune response immunostimulatory oligonucleotide and vaccine for use in disease therapy and gene therapy
Abstract: DERWENT ABSTRACT: NOVELTY - Using an immunostimulatory oligonucleotide for boosting an immune response of a subject or for stimulating an immune response in... ...Method: Boosting an immune response of a subject comprises administering to the subject an isolated immunostimulatory oligonucleotide comprising the hexameric sequence (I) X1X2CGX3X4, where C and G are unmethylated and X1-X4 are nucleotides, and the immunostimulatory oligonucleotide is 6-100 bases in length, and an increase in activation of the subject's... ...antigen receptors specific for the bacterial antigens. The immune system deficiency is also cancer. The immunostimulatory oligonucleotide is 8-100, preferably 8-40 bases in length. It is administered in conjunction with... ...12 expression are indicators of the immune response comprises administering to the subject an isolated immunostimulatory oligonucleotide comprising (I), in an amount where IFN-gamma and IL-12 expression is increased. The immunostimulatory oligonucleotide includes a nucleotide sequence consisting of 5'-purine-purine-CG-pyrimidine-pyrimidine-3'. It also comprises AACGTT, GACGTC, or GACGTT. The infection is a viral infection. Boosting the immune responsiveness of a... ...a sensitizing antigen without immunization of the subject by the sensitizing

antigen comprises administering an immunostimulatory oligonucleotide to the subject, where an increase in the magnitude of the subject's immune response... ...response of a subject to a sensitizing antigen toward a Th1 phenotype comprises administering an immunostimulatory oligonucleotide to the subject, where detection of a Th1 type immune response by the subject indicates... ...The desired result is measured by detecting in a sample containing lymphocytes obtained from the immunostimulatory oligonucleotide treated subject higher levels of IL-12 and/or IFN-gamma in the immunostimulatory oligonucleotide treated subject as compared to an antigen-challenged control. ACTIVITY - Antiinflammatory; dermatological; Immunosuppressive; Antibacterial; Virucide. No biological data given. MECHANISM OF ACTION - None given. USE - The immunostimulatory oligonucleotide is useful for boosting an immune response of a subject or stimulating an immune response...
E.C. Numbers:
Descriptors: immunostimulatory oligonucleotide, interferon-gamma, interleukin-12 expression increasing, vaccine, appl. immune response boosting, stimulation, systemic lupus erythematosus...

4/3,K/49 (Item 4 from file: 357) Links
Derwent Biotech Res.

0359371 DBA Accession No.: 2005-05075 PATENT
Use of an immunostimulatory oligonucleotide for preventing or suppressing antigen-stimulated, eosinophilic inflammation in an antigen-exposed subject, or shifting the immune response of a subject to an antigen toward a Th1 immune response oligonucleotide and vaccine for use in disease therapy and gene therapy

Author: KRIEG A M; KLINE J; KLINMAN D; STEINBERG A D
Patent Assignee: UNIV IOWA RES FOUND; COLEY PHARM GROUP INC; US SEC OF ARMY 2005
Patent Number: US 20050004061 Patent Date: 20050106 WPI Accession No.: 2005-065256 (200507)
Priority Application Number: US 847642 Application Date: 20040517
National Application Number: US 847642 Application Date: 20040517
Language: English
Use of an immunostimulatory oligonucleotide for preventing or suppressing antigen-stimulated, eosinophilic inflammation in an antigen-exposed subject, or shifting the immune response of a subject to an antigen toward a Th1 immune response oligonucleotide and vaccine for use in disease therapy and gene therapy
Abstract: DERWENT ABSTRACT: NOVELTY - Using an immunostimulatory oligonucleotide for preventing or suppressing antigen-stimulated, eosinophilic inflammation in an antigen-exposed subject, boosting an... ...stimulated, eosinophilic inflammation in an antigen-exposed subject comprises administering to the subject an isolated immunostimulatory oligonucleotide comprising the sequence (I): X1X2CGX3X4, where C and G are unmethylated and X1-X4 are nucleotides, and the immunostimulatory oligonucleotide is 6-100 bases in length, in an amount to suppress a Th2 immune response, where eosinophilic inflammation is prevented or suppressed. The immunostimulatory oligonucleotide includes a nucleotide sequence consisting of 5'-purine-purine-CG-pyrimidine-pyrimidine-3'. Preferably, the nucleotide sequence consists of AACGTT. The immunostimulatory oligonucleotide also comprises a nucleotide sequence selected from GTCGTT, GTCGCT, GTCGGT, GGCGTT, GGCGCT, GGCGGT, GACGTT, GACGCT, GACGGT, AACGTF, AACGCT, or AACGGT... ...allergic rhinitis, eczema, hay fever, or urticaria. Preferably, eosinophilic inflammation is in the lung. The immunostimulatory oligonucleotide is 8-100, preferably 8-40 bases in length. Boosting an immune response of a subject comprises administering to the subject an isolated immunostimulatory oligonucleotide comprising (I), where an increase in activation of the subject's lymphocytes or NK cells... ...antigen receptors specific for the bacterial antigens. The immune system deficiency is also cancer. The immunostimulatory oligonucleotide is administered in conjunction with a vaccine. It may not also be administered in conjunction... ...to an antigen toward a Th1 immune response comprises administering to the subject an isolated immunostimulatory oligonucleotide comprising (I), where detection of a Th1 type immune response by the subject indicates that... ...The desired result is measured by detecting in a sample containing lymphocyte obtained from the immunostimulatory oligonucleotide treated

subject, a lower level of IL-4 in the immunostimulatory oligonucleotide treated subject as compared to an antigen-challenged control, or a higher level of IL-12-and/or IFN-gamma in the immunostimulatory oligonucleotide treated subject as compared to an antigen-challenged control. Prevention or suppression of eosinophilic inflammation... ...by detecting lower levels of eosinophils in an inflammatory infiltrate in the lung in an immunostimulatory oligonucleotide treated subject as compared to an antigen-challenged control. Preventing or reducing antigen-stimulated, granulocyte-mediated inflammation in a tissue of an antigen-sensitized subject comprises administering an isolated immunostimulatory oligonucleotide to the subject, where a reduction in, or the absence of, a Th2 type immune... ...The desired result is measured by detecting in a sample containing lymphocytes obtained from the immunostimulatory oligonucleotide treated subject, a lower level of IL-4 in the immunostimulatory oligonucleotide treated subject as compared to an antigen-challenged control, or a higher level of IL-12 and/or IFN-gamma in the immunostimulatory oligonucleotide treated subject ms compared to an antigen-challenged control. Boosting the immune responsiveness of a...
...sensitizing antigen without immunization of the subject by the sensitizing antigen comprises administering an isolated immunostimulatory oligonucleotide to the subject, where an increase in the magnitude of the subject's immune response...
...of a subject to a sensitizing antigen toward a Th1 phenotype comprises administering an isolated immunostimulatory oligonucleotide to the subject, where detection of a Th1 type immune response by the subject indicates... ...The desired result is measured by detecting in a sample containing lymphocytes obtained from the immunostimulatory oligonucleotide treated subject, a lower level of IL-4 in the immunostimulatory oligonucleotide treated subject as compared to an antigen-challenged control, or a higher level of IL-12 and/or IFN-gamma in the immunostimulatory oligonucleotide treated subject as compared to an antigen-challenged control. Reduction or suppression of inflammation is...
...Dermatological; Ophthalmological; Antiparasitic; Virucide. No biological data given. MECHANISM OF ACTION - None given. USE - The immunostimulatory oligonucleotide is useful for preventing or suppressing antigen-stimulated, eosinophilic inflammation in an antigen-exposed subject...
E.C. Numbers:
Descriptors: immunostimulatory oligonucleotide, Th1 immune response, vaccine, appl. antigen-stimulated, eosinophilic inflammation suppression, immune response shifting, immune responsive...

4/3,K/50 (Item 5 from file: 357) Links
Derwent Biotech Res.

0356187 DBA Accession No.: 2005-01891 PATENT
Effecting an improved response to a vaccine to treat or prevent an immune system deficiency (e.g. cancer) comprises administering an amount of an immunostimulatory oligonucleotide before administering the vaccine to the subject an immunostimulant for use as an adjuvant for a vaccine against cancer, infection or atopic disease

Author: KRIEG A M; KLINE J; KLINMAN D; STEINBERG A D
Patent Assignee: UNIV IOWA RES FOUND; COLEY PHARM GROUP INC; US SEC OF ARMY 2004
Patent Number: US 20040229835 Patent Date: 20041118 WPI Accession No.: 2004-813305 (200480)
Priority Application Number: US 877407 Application Date: 20040624
National Application Number: US 877407 Application Date: 20040624
Language: English
...or prevent an immune system deficiency (e.g. cancer) comprises administering an amount of an immunostimulatory oligonucleotide before administering the vaccine to the subject an immunostimulant for use as an adjuvant for...
Abstract: ...an improved response to a vaccine comprises administering to a subject an amount of an immunostimulatory oligonucleotide before administering a vaccine to the subject to boost the subject's immune system and effect an improved response to the vaccine. DETAILED DESCRIPTION - The immunostimulatory oligonucleotide is 8-100 nucleotides long and comprises a mitogenic CpG motif 5' X1X2CGX3X4 3', where...
...The infectious organism is selected from viruses, infectious bacteria,

mycobacteria, infectious fungi, and parasites. The immunostimulatory oligonucleotide is a DNA or RNA oligonucleotide comprising an unmethylated cytosine-guanine (CpG) dinucleotide. The CpG motif is AACGTT, AGCGTT, GACGTT, GGCGTT, GTCGTT, GTCGCT, GGCGCT, GACGCT, or AACGCT. The X1X2 are nucleotides selected from... ...GpA and ApA, and the X3X4 are nucleotides selected from TpT, CpT, and GpT. The immunostimulatory oligonucleotide comprises a phosphorothioate or phosphorodithioate backbone modification. ACTIVITY - Immunostimulant; Cytostatic; Virucide; Fungicide; Antibacterial; Antiparasitic; Antiallergic... ...bacterial or parasitic infection), an atopic disease (including atopic dermatitis) or an allergy. ADMINISTRATION - The immunostimulatory oligonucleotide is administered via a systemic route, such as subcutaneous or intravenous (claimed). No dosage given...
E.C. Numbers:
Descriptors: ...infection, atopic dermatitis, allergy, prevention, gene therapy tumor cytostatic virucide fungicide antibacterial antiallergic dermatological DNA sequence (24, 03)

4/3,K/51 (Item 6 from file: 357) Links
Derwent Biotech Res.

0339787 DBA Accession No.: 2004-12079 PATENT
New polypeptide, useful for identifying key amino acids in a TLR9 of a first species which confer specificity for CpG DNA optimized for TLR9 of the first species recombinant protein production via plasmid expression in host cell for use in amino acid identification

Author: LIPFORD G B; MOOKHERJEE N; BABIUK L; BROWNLIE R; GRIEBEL P; MUTWIRI G; HECKER R
Patent Assignee: COLEY PHARM GMBH; UNIV SASKATCHEWAN; QIAGEN GMBH 2004
Patent Number: WO 200426888 Patent Date: 20040401 WPI Accession No.: 2004-295374 (200427)
Priority Application Number: US 412479 Application Date: 20020919
National Application Number: WO 2003US29577 Application Date: 20030919
Language: English
Abstract: DERWENT ABSTRACT: NOVELTY - A new isolated polypeptide comprises a sequence having 821, 819, 820, 818, 1032, 1030, 1029, 1031 or 1029 amino acids. DETAILED DESCRIPTION... ...CLAIMS are also included for the following: (1) an isolated nucleic acid molecule comprising a sequence encoding the polypeptide; (2) a vector comprising the nucleic acid; (3) a cell comprising the... ...operatively linked to a promoter sensitive to NF-KB. The candidate TLR9 ligand is an immunostimulatory nucleic acid. The immunostimulatory nucleic acid is CpG DNA. The screening method to identify species-specific CpG-motif preference... ...isolated polypeptide comprises: (1) contacting an isolated polypeptide with a CpG DNA comprising a hexanier sequence consisting of GACGTT, AACGTT, CACGTT, TACGTT, GGCGTT, GCCGTT, GTCGTT, GATGTT, GAAGTT, GAGGTT, GACATT, GACCTT, GACTTT, GACGCT, GACGAT, GACGGT, GACGTC... ...to a promoter sensitive to NF-KB. The CpG DNA is an oligodeoxynucleotide having a sequence consisting of: (1) TCCATGACGTTTTTGATGTT; (2) TCCATAACGTTTTTGATGTT; (3) TCCATCACGTTTTTGATGTT; (4) TCCATTACGTTTTTGATGTT; (5) TCCATGGCGTTTTTGATGTT; (6) TCCATGCCGTTTTTGATGTT; (7...
E.C. Numbers:
Descriptors: ...gene transfer expression in host cell, antibody, appl. amino acid identification, CpG DNA optimization DNA sequence protein sequence (23, 25)

4/3,K/52 (Item 7 from file: 357) Links
Derwent Biotech Res.

0337898 DBA Accession No.: 2004-10190 PATENT
New host-vector system comprising a host chromosome, and a vector, useful as a vaccine for immunizing a poultry, preferably chicken, against coccidiosis for use vaccine and fowl immunization

Author: CURTISS R; KONG W

Patent Assignee: UNIV WASHINGTON 2004
Patent Number: WO 200420643 Patent Date: 20040311 WPI Accession No.: 2004-239203 (200422)
Priority Application Number: US 407522 Application Date: 20020901
National Application Number: WO 2003US26883 Application Date: 20030829
Language: English
Abstract: ...DESCRIPTION - The host-vector system comprises: (a) a host chromosome comprising: (i) an activatible control sequence that is activatible by an inducer; (ii) a sequence that encodes a repressor, where the sequence is operably-linked to the activatible control sequence; and (iii) at least one essential gene that encodes a polypeptide that is necessary for... ...is inactivated; and (b) a vector comprising: (i) a eukaryotic expression cassette comprising eukaryotic promoter sequence; site for insertion of a gene encoding a desired gene product; and a polyadenylation sequence; (ii) a prokaryotic activator-promoter sequence; (iii) at least one origin of replication (ori); (iv) a regulatable prokaryotic promoter, which is... ...rigid layer of a cell wall of a prokaryote; (vi) at least one transcription terminator sequence; and (vii) at least one CpG sequence motif that enhances immunogenicity. INDEPENDENT CLAIMS are included for the following: (1) a microorganism comprising... ...from Eimeria, HBV, or Streptococcus pneumoniae. The eukaryotic promoter is CMV. The prokaryotic activator-promoter sequence is araC Pbad. The ori is pUC, pBR, p15A, pSC101, or pBAC. The regulatable control sequence is P22 Pr or Ptrc. The repressor is C2, Lac I, or both. The essential... ...has a mutation that changes an ATG start codon to GTG or TTG. The terminator sequence is rrfG. This system comprises at least three terminator sequences, or at least two essential genes. The CpG sequence motif is GTCGTT, GACGTT, GACGTC, AACGTT or AGCGCT. The inducer is arabinose. The first and second inducers are arabinose. The host...
E.C. Numbers:

4/3,K/53 (Item 8 from file: 357) Links
Derwent Biotech Res.

0332441 DBA Accession No.: 2004-04733 PATENT
Detecting an epigenetic abnormality associated with a disease by identifying, within a eukaryotic genome, a locus having a hypomethylated sequence specific for the disease and an endogenous multi-copy DNA element for use in Huntington chorea, schizophrenia and bipolar disorder therapy

Author: PETRONIS A
Patent Assignee: CENT ADDICTION and MENTAL HEALTH 2003
Patent Number: WO 2003104487 Patent Date: 20031218 WPI Accession No.: 2004-062375 (200406)
Priority Application Number: US 386818 Application Date: 20020606
National Application Number: WO 2003CA820 Application Date: 20030606
Language: English
...associated with a disease by identifying, within a eukaryotic genome, a locus having a hypomethylated sequence specific for the disease and an endogenous multi-copy DNA element for use in Huntington. ...
Abstract: ...associated with a disease comprises identifying, within a eukaryotic genome, a locus having a hypomethylated sequence specific for the disease and an endogenous multi-copy DNA element. DETAILED DESCRIPTION - INDEPENDENT CLAIMS... ...chromosomal region associated with a disease state; (2) a method of identifying a DNA coding sequence having an epigenetically altered expression pattern that contributes to a disease in an organism; (3... ...a disease, the step of identifying comprises separate steps of identifying the disease-specific hypomethylated sequence and identifying the endogenous multi-copy DNA element. The steps may be performed in any order. The disease-specific hypomethylated sequence and the endogenous multi-copy DNA element are within 10 kilobases of separation. The endogenous... ...comprises identifying a locus, within DNA obtained from the diseased sample, that has a DNA sequence that is hypomethylated and an endogenous multi-copy DNA element, where the DNA sequence is methylated in a non-disease sample and where the chromosomal region consists of from... ...10 DNA coding sequences that are proximal to the identified locus. Identifying a DNA coding sequence having an epigenetically

altered expression pattern that contributes to a disease in an organism comprises identifying a locus, within DNA obtained from the diseased sample, that has a DNA sequence that is hypomethylated and an endogenous multi-copy DNA element, the DNA sequence being methylated in a non-disease sample and comparing expression patterns of the DNA coding sequence that comprises, or that is located proximal to, the identified locus within the diseased sample and the non-diseased sample, to identify the DNA coding sequence having an epigenetically altered expression pattern. The disease comprises Huntington's disease, schizophrenia or bipolar disorder. Diagnosing an epigenetic abnormality correlated with a disease comprises identifying a DNA sequence that is hypomethylated within a locus that has an endogenous multi-copy DNA element and is obtained from a diseased sample, the DNA sequence being methylated in a non-disease sample. Detecting an epigenetic abnormality associated with a non... ...produce a PCR product; (e) cloning of the PCR product into a sequencing vector; (f) sequence determination of the PCR product to obtain a sequence of the PCR product; and (g) comparing the sequence against a genomic database to assign a locus for the epigenetic abnormality associated with a... ...DNA element is a multicopy DNA element. The multi-copy DNA element comprises endogenous retroviral sequence, LINE, SINE, L1 or Alu. The methylation-sensitive restriction enzyme comprises AatII (GACGTC); Bsh1236I (CGCG... ...Kpn2I (TCCGGA); MluI (ACGCGT); NotI (GCGGCCGC); NsbI (TGCGCA); PauI (GCGCGC); PdiI (GCCGGC); Pf123II (CGTACG); Psp1406I (AACGTT); PvuI (CGATCG); SalI (GTCGAC); SmaI (CCCGGG); SmuI (CCCGC); TaiI (ACGT) or TauI (GCSGC). Identifying a... ...produce a PCR product; (e) cloning of the PCR product into a sequencing vector; (f) sequence determination of the PCR product to obtain a sequence of the PCR product; (g) comparing the sequence against a genomic database to assign a locus for the epigenetic abnormality associated with a... ...with an epigenetic abnormality comprises identifying, within a eukaryotic genome, a locus having a hypomethylated sequence specific for the disease and an endogenous multi-copy DNA element. Diagnosing a disease correlated with an epigenetic abnormality comprises identifying a DNA sequence that is hypomethylated within a locus that has an endogenous multi-copy DNA element and is obtained from a diseased sample, the DNA sequence being methylated in a non-disease sample. USE - The method is useful for detecting an...
E.C. Numbers:
Descriptors: DNA sequence, polymerase chain reaction, vector-mediated gene transfer, expression in host cell, appl. Huntington chorea, schizophrenia ...

4/3,K/54 (Item 9 from file: 357) Links
Derwent Biotech Res.

0330149 DBA Accession No.: 2004-02441 PATENT
New nucleic acids, useful for inhibiting the synthesis of a target protein in a eukaryotic cell, or for treating various diseases by inhibiting the expression of abnormal or mutated proteins, e.g. leukemia, viral or bacterial infection target protein inhibition and viru vector expression in host cell for use in disease gene therapy

Author: SHI Y; SUI G
Patent Assignee: SHI Y; SUI G 2003
Patent Number: US 20030180756 Patent Date: 20030925 WPI Accession No.: 2003-852231 (200379)
Priority Application Number: US 301516 Application Date: 20021121
National Application Number: US 301516 Application Date: 20021121
Language: English
Abstract: ...NOVELTY - A new nucleic acid comprising in a 5'-3' order: an RNA polymerase promoter sequence; a first target sequence that is essentially complementary to a sequence of a target nucleic acid or its complement; a spacer sequence; a second target sequence that is essentially complementary to the first target sequence; and an RNA polymerase termination signal, where an RNA transcribed from the nucleic acid can... ...an RNA comprising the following nucleotide sequences in a 5'-3' order: a first target sequence of about 19-25 nucleotides, which is at least about 95% identical to a portion of a nucleotide sequence of a target nucleic acid or its complement, a spacer sequence of about 5-10 nucleotides, a second target

sequence of about 19-25 nucleotides that is essentially complementary to the first target sequence, and at least a portion of an RNA polymerase termination signal, where the RNA inhibits expression of a target gene comprising a sequence that is essentially complementary to the first or the second target sequence; (2) a cell comprising the nucleic acid cited above; (3) a method for preparing a... ...signal comprises a number of thymidines sufficient for arresting Pol III activity. The first target sequence is at least about 95% identical to a nucleotide sequence of the target nucleic acid or its complement. The first target sequence is perfectly complementary to a sequence of a target nucleic acid or its complement. The target nucleic acid is a target... ...the second target sequences comprise about 15-30, preferably 19-25 nucleotides. The first target sequence comprises a portion of the coding sequence of the target nucleic acid or its complement. The first and the second target sequences... ...of thymidines sufficient for arresting Pol III activity is 4 or 5 thymidines. The spacer sequence consists of about 3-15 or 5-10, preferably 6 nucleotides. The spacer sequence comprises a palindromic sequence, which is AACGTT. The Pol III promoter comprises a U6 promoter. The Pol III promoter comprises from about nucleotide -315 to about nucleotide +1 of the mouse U6 promoter having a fully defined sequence of 316 bp given in the specification. The nucleic acid is DNA, and is in... ...In the nucleic acid cited above, the polymerase is a Pol III, the first target sequence is essentially complementary to a sequence of a target nucleic acid or its complement, the first and the second target sequences consist of about 19-23 nucleotides and are perfectly complementary to each other, the spacer sequence consists of about 6 nucleotides, and the RNA polymerase termination signal consists of 4 or... ...preferably comprises the following nucleotide sequences in a 5'-3' order: a Pol III promoter sequence, a first restriction enzyme recognition sequence, a spacer sequence, a second restriction enzyme recognition sequence, and a number of thymidines sufficient for arresting Pol III activity, where an RNA molecule... ...and second restriction enzyme recognition site, respectively, inhibits expression of a target gene comprising a sequence that is essentially complementary to the first or the second target sequence . The nucleic acid further comprises at least one additional restriction enzyme recognition sequence between the Pol III promoter and the first restriction enzyme recognition sequence, or between the second restriction enzyme recognition sequence and the thymidines sufficient for arresting Pol III activity. Preferred RNA: The RNA forms a ... ...of about 19-23 nucleotides and are perfectly complementary to each other, the first target sequence is perfectly complementary to a sequence of the target nucleic acid or its complement, and the polymerase termination signal consists of... ...cell comprises providing the nucleic acid cited above, and introducing into the first restriction recognition sequence a first oligonucleotide of about 15-30 nucleotides comprising a sequence that is essentially complementary to a sequence of the target nucleic acid. The method further comprises introducing into the second restriction recognition sequence a second oligonucleotide of about 15-30 nucleotides that is essentially complementary to the sequence of the first oligonucleotide. The first oligonucleotide comprises about 20-23 consecutive nucleotides of the target nucleic acid or its complement. The method further comprises introducing into the second restriction recognition sequence a second oligonucleotide comprising a nucleotide sequence that is perfectly complementary to the sequence of the first oligonucleotide. Producing RNA molecules that inhibit expression of a target nucleic acid in a eukaryotic cell comprises introducing into a eukaryotic cell the nucleic acid above, where the first target sequence is essentially complementary to a sequence of the target nucleic acid or its complement, such that the nucleic acid is transcribed... ...and produces RNA molecules that inhibit expression of a target nucleic acid. The first target sequence is perfectly complementary to a sequence of the target nucleic acid and the first and the second target sequences consist of... ...cell comprises introducing into a target cell the nucleic acid above, where the first target sequence is essentially or perfectly complementary to a sequence of the nucleic acid encoding the target protein or its complement, such that the nucleic... ...introducing into the cell of the subject the nucleic acid above, where the first target sequence is essentially or perfectly complementary to a sequence of the gene encoding the target protein or its complement, such that the nucleic acid... ...Pol III)-specific RNA transcript. The resulting RNA was composed of two identical 21-nucleotide sequence motifs in an inverted orientation separated by a 6-bp spacer of non-homologous

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sequences...
E.C. Numbers:
Descriptors: RNA-polymerase promoter sequence, termination signal, target protein
inhibition, adeno virus vector-mediated gene transfer expression in eukaryotic
host... ...disease, amyotrophic lateral sclerosis therapy, gene therapy cytostatic
hemostatic virucide neuroprotective nootropic antiparkinsonian tumor protein
sequence DNA sequence (23, 05)


? d s
Set     Items   Description
S1        256   S AACGTT
S2         32   S S1 AND (LIP?)
S3        238   S S1 AND (OLIGONUCLEOTIDE OR ANTISENSE OR SEQUENCE OR DINUCLEOTIDE
OR IMMUNOSTIMULATORY)
S4         56   RD  (unique items)
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